

THE GRAMMATICALIZATION
OF
CHINESE CONJUNCTIVE ADVERBS

By

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This study investigates the history of grammaticalization of the Chinese conjunctive adverbs *jiu*, *hai*, *cai*, *zai*, *you*, and *ye* in the functional, discourse and cognitive perspectives. The theoretical frameworks that this study adopts are those of Heine, Hopper and Traugott, and Bybee. It is found that the historical development of the Chinese conjunctive adverbs follows the general paths of the grammaticalization theory very closely--moving from verbs to adverbs and finally to conjunctions. The principles of overlapping, asymmetry between cognitive and linguistic structures, decategorization and recategorization, and grammaticalization chain all seem to be borne out in their historical development. On the other hand, some of the Chinese conjunctive adverbs split in the process of their development and took on different semantic and syntactic functions. This process accounts well for their divergent interpretations in Modern Mandarin.

CHAPTER 1 INTRODUCTION

1.1 The Structure of the Study

This study investigates the grammaticalization of Chinese conjunctive adverbs *jiu*, *hai*, *cai*, *zai*, *ye*, *zhi* and *you*. These words were originally lexical items, either as verbs or as nouns, and were later grammaticalized as connectives. By revealing the history of their evolution, we can not only describe more accurately the adverbs' various usages in contemporary Chinese, but we can also have a better understanding of the factors that cause languages to change in grammar in general and that motivated the conjunctive adverbs' grammaticalization in particular.

Chapter One discusses this study's theme, issues, theoretic background, and data collection. Chapter Two describes the conjunctive adverbs from a synchronic perspective. After demonstrating each adverb's different usages in contemporary Chinese, the chapter arranges these meanings along a hypothesized grammaticalization path based on their semantic relatedness. Chapter Three is a detailed description of the adverbs' historical development to support the proposed grammaticalization paths as historically verifiable. Close attention is paid to the cognitive and discourse factors which motivated the grammaticalization of the adverbs, such as iconicity, metaphorical extension and rhetorical structure. Chapter Four

provides parallel evidence for grammaticalization in Chinese by revealing the historical development of futurity markers *jiang*, *hui*, and *yao*, in which similar processes, such as reanalysis and metaphorical extension, can be seen. Chapter Five summarizes the study and presents a conclusion.

1.2 The Theme

The aim of this study is to present a detailed analysis of Chinese conjunctive adverbs. Unlike many Indo-European languages in which the adverb is a relatively open category, the Chinese adverb is a closed category (Wang, 1992). A very small number of words belong to this group, and they are nearly equivalent with the so-called focus particles in English such as *only*, *also*, *too*, *even*, and *still*. There are, however, some very important differences between Chinese conjunctive adverbs and English focus particles.

First, as we can see, they are named differently. Jespersen (1924: 87-92) claims that most grammarians exaggerated the dissimilarities between adverbs, prepositions, conjunctions, and interjections. Therefore, he puts all of them under a single name, "particles" (Jespersen). Following his position, many Western scholars differentiate among the words categorized under adverb, preposition, conjunction and interjection by putting a modifier before the name "particles," such as "focus particles" (latest, König, 1991b). Since the category of adverb in Chinese is a closed one, its members being well known with very clearly definable syntactic characteristics, such as the location between subject and verb, we will stay with the tradition of Chinese

linguistics, calling words such as *jiu*, *ye*, *hai*, *cai*, *zai*, *zhi* and *you* "conjunctive adverbs."

Second, in English there is only a very limited inventory of expressions involving focus particles, and their contribution to the meaning of a sentence does not seem to be very important (König, 1991b:1). Whereas in Chinese, these conjunctive adverbs are very pervasive and contribute significantly to the understanding of the utterances.

Third, though English focus particles are always tied to connectives, they can not perform conjunctive functions independently. Chinese conjunctive adverbs, on the contrary, can. For instance:

1). *Ni qu wo jiu qu.*

you go I jiu go.

"I will go (if) you go."

Chinese conjunctive adverbs exhibit great semantic diversity, as they can be used with various syntactic constituents. Some scholars call them 'synsemantic concepts' (Sasse, 1993), since they acquire their semantics only in combination with other linguistic elements, as opposed to 'autosemantic' elements that have concrete/autonomous meanings in themselves. But these Chinese adverbs were historically 'autosemantic' elements also. Most previous studies on Chinese adverbs are either solely in synchronic perspective or solely in diachronic perspective. The former obviously fails to describe the relationships between different functions held by a single adverb and the relationship between conjunctive adverbs as a group and other categories, for example, conjunctions. The latter

makes no significant contribution to synchronic studies of the language.

This study overcomes these shortcomings by combining the synchronic and diachronic approaches and providing an adequate description of Chinese conjunctive adverbs as well as an explanation of how autosemantic elements became synsemantic elements. By doing so, we hope to make some contribution to the understanding of language change, grammar formation in particular, and human cognitive activities in general.

1.3 The Issue

1.3.1 Synchronic and Diachronic Linguistics

Saussure claims that "diachronic and synchronic studies contrast in every way" (Saussure, 1922/1983:89). Ever since he drew this radical distinction, most linguists have been giving the priority to the synchronic study of language. This trend reached its peak when Chomsky stated that a language's diachronic facts are irrelevant to its native speakers' knowledge of the language (Chomsky, 1968). Consequently, mainstream linguists totally excluded diachronic study from their work.

There are, however, some dissenting voices. Jespersen points out that a grammar should be both descriptive and explanatory. In order to do so, "our grammar must therefore be historical to a certain extent," because "what in one period was a regular phenomenon may later become isolated and appear as an irregularity" (Jespersen, 1933/1964:20). He concluded that "languages are always in a state of flux, that they are never fixed in every detail, but that in each of them there are necessarily points that are liable to change even in the course

of a single generation" (Jespersen, 1924/1992:31). Interestingly enough, some outstanding Chinese linguists followed Jespersen's position from the very beginning and never deviated from it. Wang Li, a prominent Chinese linguist, points out that Chinese grammarians must have two types of knowledge: one is Chinese philology, the other, general linguistics. Without knowledge of Chinese philology, a linguist can apply only Western concepts to Chinese data. Even in the study of modern grammar, without historical evidence, it will be very difficult for us to avoid giving strained interpretations and drawing far-fetched analogies (Wang, 1943/1985:16).

In the past three decades or so, many linguists have realized the harm of absolutely separating synchronic linguistic study from diachronic study. They urge colleagues to reconsider the importance of diachronic investigation for synchronic description (e.g. Traugott, 1965; Li and Thompson 1967; Hopper and Thompson, 1991; Hopper, 1992).

In the present study we will use diachronic investigation as an explanatory parameter to the synchronic description of Chinese conjunctive adverbs and offer answers as to how and why these words have so many different functions and what kind of relationship exists between them.

1.3.2 Autonomous and Dynamic Grammar

Behind current formal linguistics is a very basic assumption that people's knowledge of language, namely grammar, is innately endowed and therefore an autonomous system that is independent of other human cognitive faculties and social activities. All linguistic phenomena "can be handled rather straightforwardly in

a theory that supplements a strictly grammatical competence with non-trivial principles for putting that competence to use in actual speech" (Newmeyer, 1984:972). But if one considers historical factors relevant to grammar, as mentioned above, one will see grammar as a dynamic system that is not independent of other cognitive faculties and social activities.

The present study attempts to answer questions such as why a small number of lexical items became conjunctive adverbs and others did not, what kind of attributes qualified them as candidates, and what kind of factors triggered and drove the change. In order to do so, we have to look into both linguistic and extra-linguistic factors and treat grammar as a dynamic system.

1.3.3 Rhetoric and Grammar

Even though the earliest linguistic study was concerned with rhetorical skills, and linguistics has long been closely tied to rhetoric, modern linguists have encouraged the separation of one from the other. Saussure distinguishes between *langue* and *parole* (Saussure 1922), while Chomsky makes a distinction between *competence* and *performance*. Both claim that the objective of Linguistics is *langue* or *competence*. But again, there are linguists who disagree. Hopper and Thompson play down the boundary between grammar and rhetoric:

In trying to understand how grammars come to be the way they are, and in considering the dynamic interplay between language use and grammar, we are led inescapably to the conclusion that grammars are shaped by patterns in the way people talk;...Regularities of all kinds arise because of the certain strategies people habitually use in negotiating what they have to say with their hearers. (Hopper and Thompson, 1991:2)

Hopper even predicts that "linguistics will in making this return to orality recover its traditional concern with the rhetorical role of language in everyday human affairs" (Hopper, 1992:236).

In order to explain why Chinese conjunctive adverbs are much more significant to Chinese structure than their counterparts in English and why they only appear in satellite-nucleus clause order, we have to look into the different rhetorical structures of the two languages.

1.3.4 Focus and Clause Linkage

We have mentioned in 1.1 that Chinese conjunctive adverbs are nearly equivalent with English focus particles and these English particles are always tied-up with conjunctions. As a matter of fact, Chinese conjunctive adverbs have an even closer relationship with conjunctions. Not only are they always required as an backward linking element to cooperate with forward linking elements (Li and Thompson, 1981:637), but they can, as morphemes, form conjunctions with the copula *shi*. For example: *jiu--jiushi* (even if), or *bujiushi* (indicating the insignificance of a previous utterance or purpose):

2) Ni shuo le ban tian, *bujiushi* bu xiang ran wo qu ma!

you say ASP half day *bujiushi* not want let I go PART

"After all of your talking, isn" it just that you don't want me to go?"

Since the copula is also closely linked to focus, it seems that there is a unique relation between focus and clause linkage. The present study intends to explore the relation in detail.

1.4 Theoretical Background

This study is conducted within the conceptual framework of grammaticalization. The classic definition of the phenomena of grammaticalization was provided by Jerzy Kurylowicz:

"Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to grammatical or from a less grammatical to a more grammatical status" (Jerzy Kurylowicz, 1975:52). As a conceptual framework, grammaticalization can be defined as:

...that part of the study of language that focuses on how grammatical forms and constructions arise, how they are used, and how they shape the language. The framework of grammaticalization is concerned with the question of whether boundaries between categories are discrete, and with the interdependence of structure and use, of the fixed and the less fixed in language. (Hopper and Traugott, 1993:1)

From this characterization some important tenets of grammaticalization can be extracted:

a) Categories are non-discrete and have a heterogeneous internal structure. A crucial concept of grammaticalization is the notion of continuum or cline or chains. Schlesinger claims that "Although there may be two discrete linguistic categories, instrumental and comitative, this does not mean that we view the world in terms of such discrete categories. In our cognitive structures there are apparently no such neatly delimited classes. Rather, there is a continuum, and language, because of its necessarily limited means of expression, imposes a classification on this continuum" (Schlesinger 1979:309-10).

b) Grammar should be panchronic. "For a theory of grammaticalization it is both unjustified and impractical to

maintain a distinction between synchrony and diachrony" (Heine, Claudi and Hünemeyer, 1991:258). Lehmann points out:

Under the diachronic aspect, grammaticalization is a process which turns lexemes into grammatical formatives and makes grammatical formatives still more grammatical. From the synchronic point of view, grammaticalization provides a principle according to which subcategories of a given grammatical category may be ordered. (1985:303)

c) Ultimately, grammatives evolve out of discourse; the actual process of grammaticalization can be viewed to proceed along a path as first hypothesized by Givon (1979:209):

discourse > syntax > morphology > morphophonemics > zero

Hopper represents a more radical position which insists that grammar is neither a complete and predetermined system nor prerequisite for generating discourse, but "a vaguely defined set of sedimented (i.e grammaticized) 'recurrent' patterns whose status is constantly being renegotiated in speech and which cannot be distinguished in principle from strategies for building discourses" (Hopper, 1987:118). In other words, grammar "emerges" from discourse.

d) Functional explanations are sought for: "The relevant question is not: why is there this variation or that change? but rather: what are this variation and that change for?" (Lehmann 1985:317).

e) In looking for functional explanations of grammaticalization phenomena, functional typology and cross-linguistic work, in general, may provide pieces of important evidence. Thus with the help of "sufficient evidence from cross-linguistic studies, the researcher can extrapolate pragmatic

functions from the forms recruited for grammatical purposes" (Hopper and Traugott 1993:180).

f) Polysemy, being viewed as "a natural outcome of grammaticalization" (Heine et al. 1991b:260), is an important diagnostic for determining the degree of grammaticalization of a given item:

...from the perspective of grammaticalization it is methodologically essential to assume polysemy if there is a plausible semantic relationship, whether or not the forms belong to the same syntactic category, because otherwise relationships between more and less grammaticalized variants of the same form cannot be established, either diachronically or synchronically. (Hopper and Traugott, 1993:71)

g) Metaphor and metonymy are recognized as two major cognitive and pragmatic processes triggering the semantic changes observable in grammaticalization. (Traugott and König, 1991)

By its dynamic nature, grammaticalization study draws on many different disciplines. Linguists who work within grammaticalization framework can take different approaches toward the phenomenon of grammaticalization.

1.4.1 Functional Typology

The functional-typological approach to the study of language is of course inextricably linked to the name of Joseph H. Greenberg and his 1960 article on implicational universals in morphology and word order. But the most influential works on grammaticalization in this approach have been done by Givón (1971, 1979, 1984/90), Bybee (1985, 1994), and Lehmann (1982, 1985, 1986).

In his excellent introduction to language typology and universals, Croft (1990) presented some major concepts and methods in functional typology:

a) As a precondition for formulating so-called generalizing typologies and, possibly, universals for individual subsystems of language, data from a wide range of genetically and geographically unrelated languages must be collected and analyzed.

b) The semantic and pragmatic function of language structure must assume a prominent role in defining universally valid categories and in generalizing and explaining the observable cross-linguistic patterns and limits of variation.

c) The identification of patterns of morphological and syntactic variation across a wide range of languages offers a new perspective on historic linguistics as to the options and limits of language change.

In the rest of this section, we will review the researches done by Givon, Bybee and Lemann, who have contributed the most to the framework of grammaticalization from the approach of functional typology.

1.4.1.1 Givon

Unsatisfied with the explanation given by mainstream linguistic theory, and inspired by typological works such as that of Greenberg, Talmy Givon (1971) focused on new parameters, one of them being diachrony and language evolution. He points out that "in order to understand current morphology and morphotactics of a language, one must construct specific hypotheses about the syntactic order and transformational structure of the language at some earlier stage of its historical development" (1971b:394). Givon's classic assertion that "today's morphology is yesterday's syntax" (1971b:413) assumes that linguistic evolution is cyclic

and marks the beginning of a new era of research on the development of grammatical categories. In later years, Givon's attention is drawn to the study of discourse pragmatics. Stimulated by the conclusion of Sankoff and Brown (1976:631) that "Syntactic structure, in this case (relative clause structure in New Guinean Tok Pisin), can be understood as a component of, and derivative from, discourse structure", Givon completed his previous slogan "Today's morphology is yesterday's syntax" with the assertion that "Today's syntax is yesterday's pragmatic discourse." He argued that, in the process of grammaticalization, a more pragmatic mode of communication gives way to a more syntactic one. According to this perspective, loose, paratactic discourse structures develop into closed syntactic structures. The result is a cyclic wave of the following kind (Givon, 1979a:208-9):

discourse > syntax > morphology > morphophonemics > zero--
discourse>...

1.4.1.2 Bybee

In 1985, Bybee and Pagliuca published the results of two large-scale projects (Bybee, 1985; Bybee and Pagliuca, 1985). Both projects were cross-linguistic and provided significant ideas and data for later studies in grammaticalization.

In her monograph on morphology, primarily verbal, Bybee notes that derivational morphology is transitional between lexical and inflectional expression and proposes "a lexical/derivational/inflectional continuum" (Bybee, 1985:82) which is described in terms of two parameters, 'relevance' and 'generality'. The former indicates the relative degree to which

an element directly affects or modifies the meaning of another element; the latter refers to the degree of obligatoriness within a given syntactic construction. A high degree of relevance correlates with a low degree of generality. The concept of 'generality' contrasts with that of 'generalization' or 'weakening of semantic content' proposed by Bybee and Pagliuca (1985), who claim that the notion of generalization is twofold. On the one hand, a more general morpheme has a more general distribution, since it can be used in more contexts, and on the other hand, it is more general in that it lacks certain specific features of meaning (Bybee and Pagliuca, 1985:63). Generalization is related to the frequency of use, as Bybee and Pagliuca observed. The morphs recruited for grammaticalization are characterized by "very frequent and general use" (Bybee and Pagliuca, 1985:72) and their use will further increase once they undergo the process of grammaticalization: "As the meaning generalizes and the range of uses widens, the frequency increases and this leads automatically to phonological reduction and perhaps fusion" (Bybee and Pagliuca, 1985:76).

The most representative work done by Bybee and her associates came out in 1994. Based on the cross-linguistic investigation of 76 languages, Bybee, Perkins and Pagliuca not only identified the source meanings and grammaticalization paths for Tense, Aspect, and Modality in the languages of the world, but also formulated a very comprehensive set of hypotheses for a theory of grammaticalization. These hypotheses are:

a) Source determination: (1). It is the reference plane of basic, irreducible notions--whether they concern existence or

movement in space, psychological or social states, perspectives, and events--which serves as the basis for grammatical meaning in human languages. (2). It is the entire construction, and not simply the lexical meaning of the stem, as proposed by Heine (Heine et al,1991:38), which is the precursor, and hence the source, of the grammatical meaning. (3). It is not the source meaning that gives a unique grammatical meaning, but rather that the source meaning uniquely determines the grammaticalization path that gram will travel in its semantic development. (4). The meaning present in the source construction bears a definable relation to the grammatical meanings that later arise, and these earlier meanings prefigure the grammatical meaning.

b) Unidirectionality: The creation of grammatical materials is an evolution of substance from the more specific to the more general. The reverse direction is unknown.

c) Universal paths: There will be some cross-linguistically similar paths for the development of grammatical meaning. Any grammaticalization that begins with the same or similar source meaning can be expected to follow the same course of change. The reason for these universal paths is the existence of common cognitive and communicative patterns underlying the use of language.

d) Retention of earlier meaning: Certain more specific semantic nuances of the source construction can be retained in certain contexts long after grammaticalization has begun.

e) Consequences of semantic retention: Semantic retention of grams has consequences for synchronic analysis, for comparative studies, and for internal reconstruction. The most important

semantic property of grammatical markers is their pure relational function, but the characteristic that makes this relational function so difficult to describe is precisely the presence of traces of older, more specific meanings. Multiple uses of a single gram can be treated as different stages on a grammaticalization path. Their distribution is not random: given uses are associated only with certain others, sometimes uniquely, and from these associations we can construct diachronic development.

f) Semantic reduction and phonological reduction: The development of grammatical material is characterized by the dynamic coevolution of meaning and form. In the process of grammaticalization the semantic reduction is paralleled by phonetic reduction.

g) Layering: A language may have more than one gram as the exponent of a gram-type. The presence of one marker of a given origin does not prevent the rise of another along the same pathway. Successive layers of grammaticalization along similar paths produce grams with similar meanings rather than grams participating in maximal contrasts.

h) Relevance: Relevance is the extent to which the meaning of a grammatical category affects the inherent meaning of the lexical stem with which it is associated. The degree of relevance predicts the likelihood of lexical or derivational expression of the grammatical category, the order of affixes with respect to the stem, and the degree of morphophonological fusion between the gram and the stem. In terms of grammaticalization, relevance helps to predict the likelihood that affixation will take place

since affixation is more likely where the stem and gram form a coherent semantic unit.

1.4.1.3 Lehmann

As a working paper of the Cologne Universals Project, C. Lehmann's *Thoughts on Grammaticalization: A Programmatic Sketch* (1982) is considered by many scholars "the first modern work to emphasize the continuity of research from the earliest period (roughly Humbolt) to the present, and to provide a survey of the significant work in grammaticalization up to that time, with emphasis on work in historical linguistics" (Hopper and Traugott, 1993:30). Its comprehensiveness is so significant that many scholars think that the field of grammaticalization was newly invented by it.

Lehmann's primary interest lies in finding ways of measuring 'grammaticality', namely the degree of grammaticalization. He proposes six parameters based on three aspects that are relevant for determining the autonomy of a linguistic form. They are 'weight,' 'cohesion,' 'variability' and the relation of these notions to their paradigmatic selection and syntagmatic combination. These parameters serve to order linguistic units along a synchronic scale of grammaticalization.

In order to capture the processual nature of grammaticalization, Lehmann adds six processes to the parameters mentioned above, namely attrition, paradigmization, obligatorification, condensation, coalescence and fixation (Lehmann, 1986) as listed in table 1.1. By doing so, Lehmann cuts across different levels of language structure. The notion of 'attrition', for instance, refers simultaneously to loss in

semantic content, phonological substance, and the ability to inflect (Lehmann, 1986:6-7). These losses usually are distinguished by linguists as different processes at different levels of language structure.

Table 1.1 Parameters and Processes of Grammaticalization
(according to Lehmann 1986)

Parameter	Weak Grammaticalization	Process	Strong Grammaticalization
Integrity	Bundle of semantic features; possibly polysyllabic	Attrition	Few semantic features, or monosegmental
Paradigmaticity	Item participates in loosely segmental field	Paradigmaticity	Small, tightly integrated paradigmaticity
Paradigmatic variability	Free choice of use items according to communicative intentions	Obligatorification largely obligatory	Choice systematically constrained
Scope	Item relates to constituent of arbitrary complexity	Condensation	Item modifies word or stem
Bondedness	Item is independently juxtaposed	Coalescence	Item is affix or even phonological feature of carrier
Syntagmatic variability	Item can be shifted around freely	Fixation	Item occupies fixed slot

Using the same methodology, Lehmann proposes six parameters for a typology of clause linkage (Lehmann, 1984, 1989). These parameters are:

1. the hierarchical downgrading of the subordinate clause,
2. the main clause syntactic level of the subordinate clause,
3. the desententialization of the subordinate clause,
4. the grammaticalization of the main predicate,
5. the interlacing of the two clauses, and
6. the explicitness of the linking

Lehmann claims that there is a parallelism among these parameters:

elaboration	<----->	compression
Downgrading of subordinate clause		
weak parataxis	<----->	strong embedding
Syntactic level		
high sentence	<----->	low word
Desententialization		
weak clause	<----->	strong noun
Grammaticalization of main predicate		
weak lexical verb	<----->	strong grammatical affix
Interlacing		
weak clause disjunct	<----->	strong clause overlapping
Explicitness of linking		
maximal syndesis	<----->	minimal asyndesis

Our major concern here is the explicitness of linking.

Lehmann stresses that "the presence or absence of a connective device between two clauses has nothing to do with parataxis vs.

hypotaxis, but is exclusively a question of syndesis (Lehmann, 1984:200). There are three points related to this statement. First, the explicit linking devices have a clear anaphoric internal structure. Second, the connective devices are by nature adverbial. Third, in natural text the explicitness of the linking device is adjusted to the size of the entities linked. Lehmann points out that this "is not a question of grammar, but unpretentious style.... The relationship between small chunks of text immediately following each other is sufficiently clear from the mere adjacency. Large passages need explicit linking in order to form a cohesive text (Lehmann, 1984:211). Lehmann proposes a continuum of explicitness of linking:

Syndesis <-----> asyndesis
 anaphoric subordinate clause
 gerundial verb
 prepositional phrase
 connective adverb
 specific conjunction
 universal subordinator
 nonfinite verb form

1.4.2 Discourse Pragmatics

Linguists who take the discourse-pragmatic approach share a basic assumption: grammar cannot be autonomous. The linguistic structure emerges not from the static rules of abstract grammar, but from a process whereby strategies for constructing text get "sedimentized" into seemingly stable forms, namely from grammaticalization. Therefore, discourse must be central to the process by which grammars evolve. And "the mechanism by which

grammars emerge must be sought in the recurrent patterns in the way people track referents, regulate the delivery of information, and determine how to get their points across" (Hopper and Thompson, 1991:3). Hopper and Thompson conclude that "the primary source of explanations for grammatical observations is the set of discourse motivations for the grammaticization of forms" (Hopper and Thompson, 1991:23). The most prominent linguists in this line of research are Paul Hopper (1987, 1991, 1992, 1993) and Sandra Thompson (1988, 1990) and Hopper and Thompson (1980, 1984, 1992).

1.4.2.1 Hopper

Hopper is best known by his 'emergent grammar' theory, which "is meant to suggest that structure, or regularity, comes out of discourse and is shaped by discourse as much as it shapes discourse in an on-going process.... Its forms are not fixed templates, but are negotiable in face-to-face interaction in ways that reflect the individual speaker's past experience of these forms, and their assessment of the present context" (Hopper, 1987:142). Therefore the task of linguistic investigation is not to seek an overarching set of abstract principles, but the whole range of repetition in discourse. These repetitions reflect the regularities which promise interest as incipient sub-systems. Structure, then, is more a question of the spreading of systematicity from individual words, phrases, and small sets. Hopper pays special attention to idioms, proverbs, clichés, formulas, specialist phrases, transitions, openings, closures, favored clause types and calls all of them "formulaic expressions" (Hopper, 1987:144). He insists that in natural discourse,

there is no need for mediation by mental structure. Speaking is more similar to carrying out procedures than it is to following rules. It is a question of possessing a repertoire of strategies for building discourses and reaching into memory in order to improvise and assemble them. He claims that "grammar is what results when formulas are re-arranged, or dismantled and re-assembled, in different ways" (Hopper, 1987:145). Consequently, the major descriptive project of Emergent Grammar is to identify recurrent strategies for building discourses--strategies which have intra-linguistic or inter-linguistic generality (or both) and which move toward grammaticalization along parallel lines.

In order to establish frequently occurring, relatively stable clause types, Hopper adopted the concept 'figure' suggested by Peter Becker (1979) and defined it as "a phrase or clause which is highly standardized in its format and which permits substitution in a few restricted places" (Hopper, 1987:148). He showed that in Old English there was a handy way to build up a discourse, for example, by means of a verb-initial clause, usually preceded by a temporal adverb such as ba 'then', to elaborate a setting for an action, and may contain a number of lexical nouns introducing circumstances and participants. This type of regularity can spread outward in ways that are motivated by factors such as phonological similarity and contextual similarity.

In his 1991 paper, Hopper readdressed his rejection of the notion of a stable grammar, arguing for the continual movement towards structure. Accordingly, he focused on the incipient stages of emerging new grammatical forms, proposing five diagnos-

tic principles of grammaticalization. They are slightly different from Bybee's hypothesis mentioned earlier:

a) Layering: Within a broad functional domain, new layers are continually emerging. As this happens, the older layers are not necessarily discarded, but may remain to coexist and interact with the new layers.

b) Divergence: When a lexical form undergoes grammaticization to become a clitic or affix, the original lexical form may remain as an autonomous element and undergo the same changes as ordinary lexical items.

c) Specialization: Within a functional domain, at one stage a variety of forms with different semantic nuances may be possible; as grammaticization takes place, this variety of formal choices narrows, and the smaller number of forms selected assume more general grammatical meanings.

d) Persistence: When a form undergoes grammaticization from a lexical to a grammatical function, so long as it is grammatically viable, some traces of its original meanings tend to adhere to it, and details of its lexical history may be reflected in constraints on its grammatical distribution.

e) De-categorialization: Forms that undergo grammaticization tend to lose or neutralize their morphological markers and syntactic privileges characteristic of the full categories Noun and Verb, and to assume attributes characteristic of secondary categories such as Adjective, Particle, Preposition, etc. (Hopper, 1991:22).

Hopper's position in the study of grammar is best summarized by himself in 1992:

Grammaticalization as such is not necessarily incompatible with the idea of an *a priori* grammar, since lexical elements might be seen as entering the core grammar from the periphery. However, the concept of grammar as emergent suspects provision for fixed structure, and sees all structure as in a continual process of becoming, as epiphenomena, and as secondary to the central fact of discourse. Grammar is then to be seen as the codification of socially and historically situated set of such regularities, endorsed and hence fixed through institutions like education and writing. Viewed from this perspective, the central project of linguistics would be the study not of 'grammar', but of 'grammaticalization'--the way in which some of the collectively possessed inventory of forms available for construction of discourse become 'sedimented' through repeated use, and eventually are recognized as being to a greater or lesser degree 'grammatical'¹ (Hopper, 1992:366).

1.4.2.2 Thompson

In the early 1980s, Thompson and Hopper published two very influential articles (Hopper and Thompson, 1980, 1984). Both were devoted to proving that most so-called grammatical categories, such as transitivity and word class, are derived from their characteristic discourse functions. In their article on transitivity, Hopper and Thompson (1980) argue that high transitivity is correlated with foregrounding, and low transitivity with backgrounding. In their second article on lexical categories, Hopper and Thompson (1984) point out that the categories as basic as Noun and Verb are the "universal lexicalizations of the prototypical discourse functions of 'discourse-manipulable participant' and 'reported event' respectively" (1984:703). They concluded that "linguistic forms are in principle to be considered as LACKING CATEGORIALITY unless nounhood or verbhood is forced on them by their discourse function.... Categoriality--the realization of a form as either a N or V--is imposed on the form by discourse" (747).

In her later papers, Thompson deals with some syntactic phenomena, such as 'dative shift' and 'that-deletion', from a discourse point of view. Extending Givon's statement that 'dative shift' in English involves a change in the 'relative topicality' of the patient and the recipient arguments (Givon, 1984), Thompson takes 'topic-worthiness' to include givenness (Chafe, 1976), pronominality, animacy, shortness (Givon, 1983), specificity, definiteness, and propriety. After investigating large written English texts, she shows that recipients in post-verbal position are more topic-worthy than recipients in end position, and the 'internal dative' is overwhelmingly favored for topic-worthy recipients (Thompson, 1990). In 1991, joined by Mulac, Thompson wrote an article about 'that-deletion'. Unlike many linguists who consider 'that-deletion' an 'optional' process, Thompson and Mulac argue that 'that-deletion' in 4) and the use of the 'epistemic phrase' 'I think' in 5) are grammaticized versions of 3):

- 3) *I think* that we're definitely moving towards being more technological.
- 4) *I think* 0 exercise is really beneficial, to anybody.
- 5) It's just your point of view you know what you like to do in your spare time *I think*.

(Thompson and Mulac, 1991:313)

And they suggest that discourse frequency plays an important role in this grammaticization process.

Some of Thompson's studies have direct impact on the present study; one of them is the paper on conditional in discourse (1986, Ford and Thompson). Setting out to test Haiman's hypothe-

sis that conditionals are topics (Haiman, 1978), Thompson and Ford found that the clause order is crucial for the functions of conditionals in discourse: the initial conditionals create backgrounds for subsequent propositions, non-initial conditionals may tend to occur in places where such background is either less crucial to the understanding of the main clause, or where other material is more felicitously placed at the beginning of an utterance. In terms of the connection with preceding discourse, Thompson and Ford classified initial conditionals into four basic types: assuming, contrasting, illustrating particular case, and exploring options; and they pointed out that though a non-initial conditional qualifies as an associated proposition, it does not display such clear connecting functions with preceding or subsequent discourse. Thompson and Ford further explained how initial conditionals perform their functions:

A conditional brings a complex referent-- explicit background information expressed in a clause-- into the discourse. Subsequent propositions take the content of the if-clause as their necessary background. Whether an if-clause reiterates an assumption, makes a contrast, introduces a particular case or explores an option, it represents a limitation of focus and provides an explicit background for utterances which follow. (Ford and Thompson, 1986:370)

They also noted that, at least in spoken discourse, certain types of main clauses (i.e., evaluation and question) are particularly associated with non-initial if-clause.

Teamed up with Mattiessen, Thompson conducted a research on the structure of discourse and 'subordination' in 1986. First, they argue that it is not possible to define or even characterize the 'subordinate clause' in strictly sentence-level terms, and in order to characterize what it is that distinguishes a 'subordi-

nate clause' from a 'main clause', one must appeal to the discourse context. Second, 'subordination', namely hypotactic clause combining, is best understood as a grammaticalization of the Nucleus-Satellite relations that characterize the rhetorical organization of certain types of discourse. Some text relations are identified in English expository text so that the rhetorical structure can be described in a hierarchical fashion. This hierarchy is viewed as a linguistic reflex of a general tendency in human cognitive activity to construct groupings. This approach to discourse structure was later developed into a systematic Rhetorical Structure Theory (RST) by Thompson and Mann (1986, 1987) and Mann and Thompson (1987). According to the authors, there are three basic assumptions underlying RST:

1. Texts are not just strings of clauses; instead, they consist of hierarchically organized clauses and groups of clauses that relate to one another in various ways.

2. These relations, which can be described functionally in terms of the purposes of the writer and the writer's assumptions about the reader, reflect the writer's options for organizing and presenting the concepts.

3. The most common type of text relation is that which we call a Nucleus-Satellite relation, in which one part of the text is ancillary to the other.

(Mann and Thompson, 1987:2)

RST has three principle mechanisms: defined relations, schemas, and text structure. The defined relations are given in table 1.2:

Table 1.2 Organization of the Relation Definitions

Circumstance	Antithesis and Concession
Solutionhood	Antithesis
Elaboration	Concession
Background	Condition and Otherwise
Enablement and Motivation	Condition
Enablement	Otherwise
Motivation	Interpretation and Evaluation
Evidence and Justify	Interpretation
Evidence	Evaluation
Justify	Restatement and Summary
Relations of Cause	Restatement
Volitional Cause	Other Relations
Non-Volitional Cause	Sequence
Volitional Result	Contrast
Purpose	

(Source: Mann and Thompson, 1987:2)

At the end of their 1986 article, Mattiessen and Thompson raised an important question: "If hypotaxis in English is a grammaticalization of rhetorical relations, then it follows that the grammar of clause combining may differ radically from one language to another....then the interesting cross-linguistic issue is how and to what extent the grammar of clause-combining in a given language reflects the rhetorical organization of discourse in that language." (Mattiessen and Thompson, 1986:317) The present study offers a possible answer to the question.

1.4.3 Cognitive Semantics

Cognitive semantics supplies another source for the theory of grammaticalization. Elizabeth Traugott, Bernd Heine, Eve

Sweetser and Ekkehard König have all provided research in this field. Central to their studies in the semantics and pragmatics of, among other things, adverbial connectives, is the concept of semantic relatedness. They ultimately strive for a unified, motivated account of polysemy, observable semantic changes, and pragmatic ambiguities in terms of fundamental cognitive processes at work in communication and human perception. Cross-linguistic studies play an important role in gathering the evidence for semantic relatedness, if relatedness is not to be defined intuitively. The relatedness is built on two types of evidence: one is polysemy structures, and the other is the semantic changes in a number of languages. The idea that stands behind this is that these two pieces of evidence will typically coincide. This may be called the Principle of Generativity, and the corresponding method 'internal semantic reconstruction' (Traugott, 1986:97): Synchronically adjacent senses are also diachronically adjacent. In the domain of adverbial connectives this might be illustrated by such semantic developments as 'Simultaneity (or: concomitance) > Concession', 'Anteriority > Cause' or 'Posteriority > Preference'. Moreover, many of these semantic changes can be justly viewed as the outcome of pragmatic inferencing, which in these cases has become conventionalized.

1.4.3.1 Traugott

Traugott's major concern is with principles of semantic change in general and with the process of grammaticalization in particular. She claims that "the shifts in meaning did not occur by necessity....they were not arbitrary either. The shifts in meaning were motivated by two opposing principles. One maximizes

the asymmetry necessarily attended on saying anything. The other imposes coherence on what is said" (Traugott, 1983:525).

On the basis of the Hallidayan tripartite distinction of language functions, Traugott suggests that the main change involved in the process of grammaticalization is from the propositional/ideational via the textual to the interpersonal/expressive functional-semantic component: "If there occurs a meaning shift which, in the process of grammaticalization, entails shifts from one functional-semantic component to another, then such a shift is more likely to be from propositional through textual to expressive than in reverse direction" (Traugott, 1982:256). Reverse changes, she argues, are "highly unlikely in the history of any one grammatical marker" (Traugott, 1987:1).

This process, which is said to lead toward greater pragmaticization of meaning, is also called 'subjectification' by Traugott (cf. Langacker, 1987): "Meaning tends to come to refer less to objective situations and more to subjective ones (including speaker point of view), less to the described situation and more to the discourse situation" (Traugott, 1986a:540).

In 1991, Traugott (with König) proposed a refined framework in which three tendencies of semantic change were distinguished (Traugott and König, 1991:189):

I	External described situation	> internal (evaluative / perceptual/cognitive) situation
II	External or internal situation	> Textual situation
III	Textual situation	> Speaker's subjective belief state

She emphasized the distinction between those pragmatic meanings that are conventionalized and those that are inferred in context and defined new conventional meanings as new distinct polysemies of a form.

Concerning the question as to how semantic changes come about, Traugott drew attention to the role played by strengthening informativeness, conversational implicatures, and metonymy in the development of grammatical categories. She treated the strengthening informativeness as a type of metonymy on the basis that "the metonymy change is from less to more informative, that is, in the direction of explicit coding of relevance and informativeness that earlier was not covertly implied" (Traugott and König, 1991:212).

1.4.3.2 Heine

Heine and Reh's monograph, *Grammaticalization and Reanalysis in African Languages* (1984) was the first to address an entire linguistic area synchronically from the point of view of grammaticalization. It provided not only a classification of the phenomena to be addressed, but also an exhaustive index of the typical pathways of grammaticalization. But Heine's major contri-

bution to the theory of grammaticalization has been identifying cognitive factors in the process of grammaticalization.

Heine claims that grammaticalization is motivated by extralinguistic factors, above all by cognition (Heine, Claudi and Hünemeyer, 1991a:27). What underlies grammaticalization is a specific cognitive principle called the "principle of the exploitation of old means for novel functions" by Werner and Kaplan (1963:403), whereby concrete concepts are employed to understand, explain, or describe less concrete phenomena. Accordingly, grammaticalization can be interpreted as a problem-solving process, its primary function being conceptualization by expressing one thing in terms of another, namely metaphor. Starting with this principle, Heine and his associates explore the "metaphorical base of grammar" (Claudi and Heine, 1986; Heine and Claudi 1986). They state that there is a limited number of basic cognitive structures forming the input or source of grammaticalization, and the relation between input and output is metaphorical in nature. These source structures include some concrete concepts, such as body parts and other objects, as well as propositions that express states and processes in basic human experience which can be rendered by means of linguistic predication. Some of the most common propositions are:

- | | |
|-------------------------|------------------------|
| (1) "X is at Y" | Locational proposition |
| (2) "X moves to/from Y" | Motion proposition |
| (3) "X does Y" | Action proposition |

- | | |
|-----------------------|------------------------|
| (4) "X is part of Y" | Part-whole proposition |
| (5) "X is (like) a Y" | Equational proposition |
| (6) "X is with Y" | Comitative proposition |

(Heine, Claudi and Hünemeyer, 1991b:36)

There is a relevant process leading from the source structure to grammatical structure, which can be described in terms of a few basic categories:

PERSON > OBJECT > PROCESS > SPACE > TIME > QUALITY

The relationship among them is metaphorical: that is any of them may serve to conceptualize any other category to its right. For instance, SPACE IS AN OBJECT or TIME IS SPACE. There appears to be some kind of correlation between these metaphorical categories and the division of both word class, or sub-class, and constituent types:

Category	Word type	Constituent type
PERSON	human noun	noun phrase
OBJECT	non-human noun	noun phrase
PROCESS	verb	verb phrase
SPACE	adverb, adposition	adverbial phrase
TIME	adverb, adposition	adverbial phrase
QUALITY	adjective, adverb	modifier

However, the transfer from one category to another is not an abrupt process, but rather a gradual, continuous, overlapping, chain-like one. In order to describe this process, Heine introduced an important concept, 'Grammaticalization chain' (Heine,

Claudi and Hünneymeyer 1991b, chap.8; Heine, 1992; Heine, 1993), which has the following characteristics:

a. It refers to a linguistic form that consists of a sequence of at least two distinct but overlapping uses, where one is referred to as the source and the other as the target. An idealized structure of a minimal grammaticalization chain can be described in Figure 1.2:

Stage:	I	II	III
Type of uses:	Source	Source Target	Target

Figure 1.2 An overlap model of a minimal grammaticalization chain

b. The relation between source and target is clearly defined: The former is both historically earlier and less grammaticalized than the latter.

c. The reason for referring to this structure as a chain can be seen in the overlapping behavior it exhibits. This behavior affects all components of the relevant linguistic form, from its semantic to its morphosyntactic, and even its phonological component.

d. The overlapping is responsible for the fact that (i) grammatical categories are inherently ambiguous in certain uses, and that (ii) grammaticalization chains are unidirectional, extending from historically earlier/less grammaticalized to later/more grammaticalized uses.

e. A grammaticalization chain has both a diachronic and synchronic dimension: diachronic in that it is the result of

language change, synchronic in that it consists a range of synchronically defined uses.

f. A Grammaticalization chain can be defined as linearly structured family resemblance categories.

(Heine, 1993:53)

1.4.3.3 Sweetser

In her 1988 paper on grammaticalization and semantic bleaching, Sweetser argues that though there is a "weakening of semantic content" (Bybee and Pagliuca 1985) in the process of grammaticalization, this loss is only part of the development concerned: by transferring the schematic structure from the source domain to some particular target domain, the meaning of the latter is added to the meaning of the transferred entity. Thus, in addition to losses, there are also semantic gains in grammaticalization. Sweetser focuses on defining which aspects of meaning are lost in grammaticalization and which are preserved. She finds that "it is precisely the (metaphorically structured) image-schematic inferential structure which is preserved, rather than other aspects of inferential structure which happen to be present" (Sweetser, 1988:400).

Sweetser's monograph *From Etymology to Pragmatics*(1990) represents her basic thinking of language. She argues that language is shaped by cognition and one's experience of the world. She examines historical change and pragmatics in light of metaphorical extension, culture and cognition. Her analysis focuses on polysemy, lexical semantic change, and pragmatic ambiguity. As she points out, these three linguistic phenomena are similar in that they all represent instances of multiple functions mapped

onto a single form. She claims that far from being a random, arbitrary process, this mapping of function to form is marked by regularity and systematicity. The mapping is unidirectional, with the physical realm and experience providing the vocabulary for psychological states, for example, a mental state, such as one's knowing something can be described in terms of the physical self, as in "I see what you mean". She distinguishes three semantic domains for a form: sociophysical (content), epistemic, and speech-act, and she considers metaphor operators between them. She argues that an utterance is multifunctional and may at one time have an identity or presence in the content, epistemic and/or speech-act domains which, in turn, may result in ambiguity. While there is more or less equal potentiality for interpreting one utterance's meaning in each of these domains, the identity is essentially pragmatically determined. For example:

6a) John came back because he loved her.

6b) John loved her, because he came back.

6c) What are you doing tonight, because there's a movie on.

In 6a), real-world causality connects the two clauses; that is to say, his love was the real-world cause of his coming back. In 6b), however, the causality would appear to be reversed, but is not. Rather, 6b) is normally understood as meaning that the speaker's knowledge of John's return causes one to conclude that John loved her. If the conjunction 'because' were understood in the content domain, 6c) would be totally incomprehensible. Since the main clause is not even a statement, the because-clause cannot be understood as stating the real-world cause of the event or situation described in the main clause. Rather, the because-

clause gives the cause of the speech act embodied by the main clause. The reading is something like "I ask what you are doing tonight because I want to suggest that we go see this good movie."

1.4.3.4 König

Most of König's work concerns adverbial connectives, such as conditional, causal, conditional concessive, and concessive. He focuses on where these connectives come from and what kind of relation exists among them.

In his papers on the source of concessive connectives, König points out that the development of the concessive is based on (1) a process of bleaching involving such emotions as 'spite', 'ingratitude' or 'conflict'; (2) the conventionalization of conversational implicatures carried by assertions of co-occurrence and co-existence of two facts; and (3) the factual use of irrelevance conditionals in certain contexts as well as the meaning of additive focus particles. Based on the observation that concessivity can be derived from a wide range of notions and constructions, König concludes:

The view that the development of grammatical meaning is motivated principally by unfulfilled communicative needs does not get any support from the facts discussed in this paper. Connectives with a concessive meaning or use are constantly added to a language, even if a large number of them is already available. What seems to play an important role in the development of such connectives is a well-known principle of creative language use, namely the constant attempt to express the same meaning in other words.
(König, 1985b:280)

In a later paper, König formulates a typology for concessive etymology that includes five types (1991a:193-4):

Type A: nouns originally denoting human reactions to actions, events or states.

Type B: notions of free choice or universal quantification.

Type C: a combination of a conditional, originally conditional or temporal conjunction and/or an additive focus particle.

Type D: expressions originally used for emphatic affirmation.

Type E: expressions which have concomitance as part of their earlier or literal meaning. This concomitance may be expressed in several ways: (i) as simple co-occurrence, (ii) as temporal co-occurrence, (iii) as denying the influence of one state/event on another.

In the same paper, König suggests that a concessive can be treated as the dual counterpart of causal. He notes that semantically both causal and concessive have a 'factual' character: that is they entail both of their component clauses and both are associated with a presupposition. In many languages, the concessive can be formally derived from causal connectives through the addition of certain particles. But a more frequent phenomenon is the use of negated causal expressions as markers of concessivity. For instance, the English word 'for' can be used as both a causal and concessive connective (1991a:203):

7) a. He was rewarded for his bravery.

b. He can be very selfish, but he is not unpleasant to work with for all that.

In a separate paper, König argues that there should be a category 'concessive conditional' between conditional and concessive, because the concessive may derive historically from the conditional via concessive conditionals. The distinction made by König between these categories is:

Conditionals and concessives are easy to distinguish semantically: the former entail neither their antecedents nor their consequents, whereas the latter entail both of their component clauses. In contrast to the simple conditional, the concessive conditional relates a set of antecedent conditions to a consequent. This set is typically specified by a disjunction, by a universal or 'free-choice' quantifier, or by a focus particle. In all concessive conditionals, the consequent is asserted to be true under any of the conditions specified in the antecedent. However, this distinction can be neutralized in certain contextual conditions. For the conditional to be used as concessive conditional the condition is: whenever a conditional protasis contains an expression marking a suitable extreme value on some scale for propositional schema, the conditional is interpreted as a concessive conditional. For the concessive conditional to be used as concessive the condition is very simple: "Both the protasis and the apodosis must be entailed, either by the context or by the concessive conditional itself." (König, 1986:240)

König concludes:

Many of the categories traditionally used for the classification and characterization of adverbial clause are not discrete ones. Under certain contextual conditions, a clause that is formally marked as one type of construction may be interpreted as another...conditionals are the most flexible in meaning since they are open to interpretation as casuals, concessive conditionals and concessive, given the

right contextual conditions. Concessive, by contrast, are the most determinate construction type. While constructions formally marked as either temporals, conditionals, concessive conditionals or casals can all be interpreted concessively, a concessive construction formally marked as such does not seem to be open to any of the other interpretations. This determinate character of concessive is also reflected in certain syntactic properties, as well as in the fact that concessive is at the very end of semantic changes involving all of the other types of adverbial clauses discussed." (1986:242-43)

The most comprehensive work on focus particles in Western languages (mainly English and German) was done in 1991b. In this work, König not only provided a semantic-pragmatic mixed framework to describe the phenomenon of focus particles but also traced their historical development and their relations with other categories, such as modal particles and conjunctions. Some important findings are given here:

A. Simple inclusion: All sentences with simple additive particles entail the corresponding sentences without the particles and presuppose that at least one of the alternative values under consideration in context satisfies the complex predicate. Simple additive particles exhibit three further uses: (i) a use as conjunctive adverb in the sense of 'moreover, furthermore'. (ii) a use as coordinating conjunction and (iii) a use as components of quantifiers, notably 'free-choice' quantifiers.

B. Scalar additive particle: Besides the simple existential presupposition that all additive particles have, scalar additive particles involve a more specific, scalar 'conventional implicature'. They induce an ordering or scale into the interpretation of the containing sentence. But there is no general agreement as to whether scalar additive particles induce a specific scale or the nature of the scale is determined by context.

C. Scalar additive particles in conditional and concessive sentences: Scalar additive particles identify a special type of conditional ('concessive conditional'), which may develop into concessive. Sentences with a scalar additive particle presuppose that there is a contextually relevant alternative, i.e. another antecedent, which satisfies the conditional relation, and evaluate the antecedent as an extreme (highly unlikely, very informative) candidate for the propositional schema 'if x then q'. In a wide variety of languages, concessive connectives are composed of a (former) conditional or temporal connective and an additive particle. The common property that makes such a development from concessive conditional to genuine concessive plausible is a conventional implicature of general incompatibility between 'antecedent' and 'consequent'. The difference between concessive and concessive conditional is the actuality of their clauses. Concessive sentences entail both their component clauses; concessive conditional neither entail their antecedent nor their consequent.

D. Excluding the complement: A sentence with a restrictive particle presupposes the relevant sentence without particle and entails that none of the alternatives under consideration satisfies the open sentence obtained by substituting a variable for the focus expression.

E. Scalar and non-scalar uses: The meaning of restrictive particles are indeterminate or vague with respect to the ordering parameter.

F. Evaluation: Given that the domain of quantification is a scale, a restrictive particle can have opposite scales: (1) The

scales associated with necessary conditions are 'natural' or 'absolute' ones. (2) The scales associated with sufficient conditions are not always semantic and the order associated with necessary conditions or factual context is reversed. (3) In contexts expressing sufficient conditions, additive and restrictive particles seem to be interchangeable, whereas they manifest the expected contrast in context expressing necessary conditions.

G. The problem of scope: The evaluation as minimal is also the essential ingredient that restrictive particles contribute to the specific meaning of purpose clauses like the following:

- 9) They drove off, only to return five minutes later.

(König, 1991b:109)

H. Restrictive particles and adversative conjunction: There is a close connection between restrictive particles and adversative conjunctions. If the particles focus on the whole sentence, they are more or less interchangeable with adversative conjunctions and are thus used as 'conjunctive adverbs'. For instance:

- 10) I would like to come. Only I haven't got time.

(König, 1991b:110)

I. Temporal scales and exclusion: There is a lexical distinction between German restrictive particles *nur* and *erst*. In contrast to *nur*, *erst* always induces an ordering. The scales associated with *erst* are typically temporal ones. In those cases where the alternative excluded by *erst* rank higher or later on a scale than the focus value and the evaluation can be described as 'minimal' or 'early', the context in the scope of the particle denotes a state or process. If *erst* is replaced by *nur* the sen-

tence no longer describes a state as part of a development but merely a state.

J. Focus particles expressing simple addition exhibit a clear affinity to the notions 'identity', 'equality' and 'increase'. More often than not, the relevant identity is one of manner and/or degree. Members of another group additive particle are either derived from verbs denoting 'increase' or 'addition' or from expressions containing the coordinating conjunction and as a component. Though it is not always clear whether an additive particle should be analyzed as belonging to the 'scalar' or the 'non-scalar' subclass, many genuinely scalar particles exhibit specific affinities: (1) inclusion, (2) emphatic reflective, (3) metalinguistic terms.

K. Restrictive particles typically derive from the numeral 'one', from privative notions and from negative constructions of the type 'nothing except'. The privative notions include those so-called 'downtoners', as in an expression like *barely, just* . It is frequently the case that the same expression functions both as an restrictive focus particle and as a downtoner.

L. Since focus particles may carry the nuclear tone under certain conditions in many languages, phonological attrition is not a typical feature in their process of grammaticalization. But 'bleaching' is a typical concomitant feature of the development of particles.

1.4.4 Iconicity, Markedness, and Related Semiotic Principles

The assumption of iconicity in language, as explored and illustrated in various publications by John Haiman (1980, 1985a, 1985b) and Talmy Givon (1985, 1990), provides fruitful ideas on

what can be learnt about conceptual structure via the analysis of linguistic structure when comparing data from a wide range of languages. For instance, the degree of coding (involving especially a decrease in formal complexity, morphological and semantic reconstructability, and an increase in semantic and functional variability, and possibly, frequency in use) may serve as an indicator of what kinds of concepts can be said to be central or peripheral to the language user.

There is a distinction between imagic and diagrammatic iconicity. Imagic iconicity is a systematic resemblance between an item and its referent with respect to some characteristic. Diagrammatic icons are systematic arrangements of signs. None of the signs necessarily resembles its referent in any way, but, crucially, the relationship among the signs mirrors the relationship among the icon's referents. It is diagrammatic iconicity which is of chief importance in linguistics, and which has suggested significant insights into the organization of language and into grammaticalization in particular. A well-known example of diagrammatic iconicity in language is the tendency for narrative order to match the order of events described; if the order is not matched, then some special marker or "diacritic" (usually a grammatical form) must be used.

1.4.4.1 Haiman

In his 1980 paper Haiman argues that although linguistic signs in isolation are symbolic, the system or grammar that relates them may be diagrammatically iconic, of which there are two types. One is ISOMORPHISM, whose existence is universally recognized. It is a one-to-one correspondence between the signant

and the signatum, whether this be a single word or a grammatical construction; that is, no true synonyms exist, and different forms must have different meanings. Another is MOTIVATION, which holds that a grammatical structure, like an omomatopoeic word, reflects its meaning directly. The clearest example of such iconicity is sequence. Other things being equal, the order of statements in a narrative description corresponds to the order of the events they describe. Unlike ISOMORPHISM, MOTIVATION is not universal, and it co-varies with the size of the lexicon. Haiman points out that the fact that conditional protoses almost always precede apodose is motivated by iconicity and that markedness is iconically motivated also (1980:528).

Later Haiman further distinguishes between iconic and economic motivations: "To the functionalist, anomalies and inconsistencies are to be expected because he recognizes the existence of competing motivations, in particular, iconic and economic motivations. At any stage of any natural language, there will be areas in the grammar where originally iconically motivated structures have become grammaticalized, and there will be others where they have not. Given that 'grammars code best what speakers do most' we should expect to find maximal coding (that is, economy and opacity) in well-trodden areas of semantic space, and minimal coding (that is, iconicity and transparency) at the peripheries" (Haiman, 1985b:259).

1.4.4.2 Givón

Unlike Haiman, who makes a distinction between ISOMORPHISM and MOTIVATION, Givón argues that this distinction is "arbitrary and not supported by traditional usage" (Givón, 1985:188). He

assumes that a reasonable sense of iconicity must presuppose the notion of 'isomorphism' and it is neither motivation nor an explanation of iconicity, but rather a necessary part of its definition. The motivation for iconic representation, he argues, must be studied for itself and most likely at a number of distinct levels. The most pervasive principle Givon postulates is "The iconicity meta-principle: All other things being equal, a coded experience is easier to store, retrieve and communicate if the code is maximally isomorphic to the experience" (Givon, 1985:189).

Givon defines three levels of iconic coding: conceptual or lexical, propositional, and discourse-pragmatic. He claims that language users' consciousness of iconicity at each of these levels is different: speakers are most conscious of lexical-level iconicities, much less conscious of propositional-level iconicities, and the least conscious of the complex, abstract isomorphic relations that manifest themselves in the coding of discourse-pragmatic functions.

Though we can apply 'the iconicity meta-principle' at all three levels, Givon suggests, specific details may vary from level to level, depending on the different functional or cognitive requirement of each specific domain and their peculiar diachronic history. The latter is particularly important, since isomorphic relations between code and coded are mediated primarily by the three developmental processes: Ontogeny, phylogeny, and diachrony. Another difference between Haiman and Givon is that

Givón does not consider iconicity and economy opposing motivations and views economy as a major mechanism that shapes the rise of iconic representation.

One important point Givón makes is the distinction between the 'semantic iconicity principle' and the 'pragmatic iconicity principle'. In the cases of SVO, SOV, and VSO languages, the primal semantic iconicity principle is followed, but in the cases of VOS and OVS languages a pragmatic iconicity principle, which translates as: "attend first to the most urgent task," is followed.

He claims that the process of syntacticization (his term for grammaticalization), by which a more transparent, iconic mode of communication gives rise eventually to the more abstract and less obviously iconic syntactic mode, is a pervasive fact of language change.

In one of his articles on markedness, Givón (1991) notes that markedness can not be determined in an absolute fashion, but is rather context-dependent. In other words, a structure that is marked in one context may be unmarked in another. For instance, the same grammatical category may have different markedness values when placed in the context of different discourse types. There is a continuum, in terms of the degree of grammaticalization and syntactic complexity, between extreme oral/informal and extreme written/formal discourse:

parameter	oral-informal (unmarked)	written formal (marked)
syntactic complexity	conjoined	embedded
grammatical morphology	sparse	abundant
word order	flexible, pragmatic	rigid,
grammatical		
processing speed	slowing, halting	faster, fluent
context dependence	higher	lower

(Givon, 1991:338)

Figure 1.3 Properties of oral vs. written discourse

According to Givon, different types of clauses have different markedness status:

unmarked	marked
main/conjoined	subordinate
declarative	manipulative
affirmative	negative
active	passive
continuative	disruptive

Figure 1.4 Markedness status of clause-type

Givon extends the notion of finiteness to include clause and suggests that two central grammatical sub-systems that are indis-

pensable in the independent main clause tend to reduce or disappear altogether in non-finite clauses:

The subject

The tense-aspect-modality

This phenomenon is particularly obvious in conjoined main clauses and in clause-chaining. He notes that chain-medial clauses tend to be the most thematically continuous clauses. This is expressed in terms of three major components of thematical coherence:

- (a) Referential continuity
- (b) Action continuity
- (c) Tense-aspect-modal continuity

(Givon, 1991:343)

1.5 The Scope of the Present Study

In the traditional practice of Chinese linguistics, Chinese conjunctive adverbs are a well-defined group of words. Only less than ten words in present Chinese belong to the group. The present study covers most of them, namely seven conjunctive adverbs *jiu*, *hai*, *cai*, *ye*, *you*, *zai* and *zhi*, and some of their counterparts in classic Chinese or other languages (English and German).

The focus of the present study is on revealing the motives and process of the grammaticalization of Chinese conjunctive adverbs, not on exhausting all the uses of these words. Therefore, some uses which are not significant to the process of the grammaticalization will be ignored, for instance, the prepositional use of *jiu*.

1.6 The Collection of Data

1.6.1 Contemporary Data

The data used for the synchronic analysis of Chinese conjunctive adverbs include both documented materials and a small number of examples constructed by the author. The documented materials include transcriptions of oral tales, dialogues from plays and novels, and excerpts from a wide range of narrative or expository texts. The examples constructed by the author are used solely for the purpose of convenience; they are neither grammatically controversial or analytically crucial. It is not impossible at all to find such examples in actual data, but it simply takes too long for them to occur. Additionally, there are some examples cited from studies constructed by other authors.

1.6.2 Historical Data

All of the material used in diachronic analysis is from written records. They cover the range from inscription on oracle bones (16th-11th century B.C) to *Ernū Yingxiongzhuan* (late 19th century). While spoken data for historical analysis were obviously unavailable, whenever possible, texts written to approximate colloquial speech were chosen over those that reflect more of the writing tradition.

Notes

¹In 1993, Hopper coauthored a text book on grammaticalization with Traugott. The book is very valuable and stimulating for all linguists interested in the development of grammatical forms and will be referred to frequently in this study.

CHAPTER 2
THE SYNCHRONIC ANALYSIS OF CHINESE CONJUNCTIVE ADVERBS

2.1 Literature Review

This section reviews previous work on Chinese conjunctive adverbs. Not every study covers the adverbs with which this study is centrally concerned. Some focus on only one of them, while others concentrate on two related adverbs, such as *jiu* and *cai*. At the end of the section we offer a summary and critique of the work reviewed and present the problems that await an answer.

2.1.1 Reference Grammars

In most reference grammars of Chinese, there is usually a preliminary account of adverbs. In Wang (1947) and Chao (1968), two pioneering works on modern Chinese, the words we are concerned with are categorized as adverbs pertaining to logical reasoning.

2.1.1.1 Wang (1947)

According to Wang, the words we are concerned with here can be used as either adverbs or connectives. As adverbs, *jiu* and *cai* may both mark time limit or 'emphasis' (*yuqi*), *ye*, *you* and *zhi* mark the limit of scope or 'emphasis', and *zai* and *you* both may mark the repetition of an action. As connectives, *jiu* and *cai* mark condition and cause, *you* and *ye* mark accumulation, and *you* can mark adversative relation, while *ye* and *hai* mark concessive relation.

2.1.1.2 Chao (1968)

Chao acknowledges the difficulty of distinguishing between adverbs and conjunctions. He makes the interesting point that there is a difference between adverbial conjunctions and class overlap. The former involves the words which are at the same time adverbs and conjunctions, whereas the latter involves the words which are sometimes adverbs and sometimes conjunctions by class overlap (Chao, 1968:799). For instance:

1) Ni lai wo jiu zou.

you come I JIU go.

"(If) you come, I then go."

In 1), *Jiu* is both an adverb modifying *zou* and a conjunction for the consequent. His term 'adverbial conjunctions' is very similar to the term that this study adopts--'conjunctive adverb'. Chao treats *jiu*, *cai*, *hai*, and *zai* as adverbs of scope/quantity and time, *ye* and *zhi* as adverbs of scope/quantity, and *you* as an adverb of time. *Cai*, *hai* and *zai* can express 'degree' also. Under the heading 'correlative conjunctions', Chao notes the conjunctive functions Chinese adverbs possess, such as *ye...ye*, *jiaru...jiu*. What he does not note is the fact that in these correlative conjunctions the adverbs have a much more prominent role than their partners, because in most cases their partners can be omitted, and the relations between clauses can be carried out by adverbs alone.

2.1.1.3 Lǚ (1977)

Lǚ offers a very detailed semantic analysis of *ye*, *you*, and *hai*. He explains the use of connectives in terms of semantic relations, of which he lists four types: conjoining, progressive,

parallel, and contractive. Among them, *ye*, *you*, and *hai* are concerned with the conjoining, progressive, and contractive relations.

The conjoining relation includes uniting and accumulative /additive relations. Lü notes that *ye* expresses the united relation, while *you* expresses the additive relation. The conjoining relation conveyed by *ye* is loose; the relation conveyed by *you*, in contrast, is a tight one. It is hard to tell the difference between Lü's additive relation and progressive relation, which is said to indicate that two connected events are ordered with the light one preceding the heavy one. According to Lü, *ye*, *you*, and *hai* can all express progressive relation, but they belong to different subtypes. *You* and *hai* express accumulative progression, while *ye* expresses comparative progression. The difference between these two subtypes is illustrated by Lü in following examples:

- 2) Budan wo danxin shoupa, bieren kanzhe ye bu
 not only I worry fear other person see YE not
 xiang hui shi.
 like CL matter

"Not only I worry (about you), but other people will
 disapprove of your behavior also."

- 3) Ju xiang de ren'er dou shi cong xiao jiu shuo
 live country NOM people all COP from little then say
 popo jia, hai you shi-yi-er sui jiu gei
 mother-in-law family HAI have eleven twelve old then give
 renjia tong-yang qu de.
 people child-raise go PART

"People living in the country were used to being caught in marriage since their childhood; moreover, some eleven or twelve year-old children were sent away and raised (by their parents-in-law)."

(Lǚ, 1977:9-13)

Lǚ claims that *ye* and *you* can also express a contractive relation. He differentiates between two subtypes of contractive relations: real contractive, which indicates that two conjoined clauses are opposite in meaning; and simple contractive, which indicates that two conjoined clauses are contractive in words, but supplementary to each other in meaning. Lǚ says that *ye* and *you* belong to the latter, thus claiming that in fact *ye* denotes 'similarity through comparison'¹.

2.1.1.4 Lǚ (1980)

Lǚ (1980) deals exclusively with Chinese functional words, i.e. 'xuci' 'empty words'. All the adverbs with which the present study is concerned are listed in this very comprehensive work:

Jiu:

(1) As adverb:

- a) expressing that something will happen very soon;
- b) stressing that something already happened long time ago.
- c) expressing close sequence of two events;
- d) strengthening confirmation.
- e) defining the scope; 'only'.
- f) emphasizing the quantity.
- g) connecting sequential text and getting the conclusion.

(2) As conjunction:

- a) expressing concessive condition.

cai:

- a) expressing something that happened lately.
- b) expressing something that happens or occurs later
than normal or expected;
- c) expressing diction of quantity or lowness of degree.
'only'.
- d) expressing condition or cause.
- e) emphasizing confirmation.

Zhi:

expressing limit.

Ye:

- a) expressing the equality between two things.
- b) expressing concession.
- c) expressing 'even'.
- d) expressing a mild tone.

You:

- a) expressing the repetition of a event or situation, or the
sequence of two events.
- b) expressing the accumulation of serial actions or states.
- c) expressing tones of speech (*yuqi*).
 - (i) changing of the direction of speech;
 - (ii) strengthening negation;
 - (iii) strengthening rhetorical question;

Hai:

expressing different tones of speech

- a) expressing neutral tone:
 - (i) expressing the continuation of action or state;

- (ii) expressing cocession;
- b) expressing positive tone, exaggerating things:
 - (i) expressing the degree of difference;
 - (ii) expressing the expansion of items, numbers and scope;
 - (iii) expressing the progression which is similar to
 - (ii) but stronger:
- c) expressing negative tone, reducing the significance of things;

Zai:

- a) expressing the repetition or continuation of an action or state, mostly in the future;
- b) expressing condition;
- c) expressing concessive condition;
- d) expressing that an action will be taken in certain situation;
- e) expressing the increase of degree;
- f) expressing an additional action or situation;

Lǚ (1980) gives a very detailed synchronic description of Chinese conjunctive adverbs. It almost exhausts the uses of each adverb, but the whole study is conducted in a strict structuralist fashion and offers no explanation for the relations between different uses of each adverb and between different adverbs.

2.1.1.5 Li and Thompson (1981)

In addition to the traditional classification, Li and Thompson distinguish further syntactic characteristics of Chinese conjunctive adverbs: As adverbs they are 'non-movable' since they occur only in the position after the subject/topic and before the

verb. And they may also serve as 'backward-linking' elements that link a clause to a preceding one. For instance:

4) ta juan le toufa cai piaoliang.

3sg curl PFV hair only/then pretty

"It's only when she curls her hair that she looks pretty."

(Li and Thompson, 1981:655)

All of the adverbs that the present study focuses on fall into the category of 'nonmanner adverbs' established by Li and Thompson. They discuss these adverbs in five groups:

A. You and zai: Zai refers to the events that have not yet happened, whereas you applies either to past or to present events. Zai can occur in imperative construction. In certain contexts, you has the meaning 'also' rather than 'again'.

B. Jiu: can be a sentence-linking element; can be used in a single sentence to mean 'immediately'; may also mean 'only'.

C. Zhi: unambiguously means 'only'.

D. Cai: has two basic meanings: 'just now' and 'only then'. In the second meaning of cai, it must refer back to some element specifying a time or a set of condition under which the predicate with cai holds true.

E. Hai, ye: Hai has three meanings: 'still/even', 'also' and 'moderately'. The basic meaning of ye is 'also'. But in the case of hai, the meaning of 'also' is applied to the predicate, not the subject, whereas in the case of ye, the meaning of 'also' is applied to the subject:

5) ta hai mai le yi ge huaping.

3sg also buy PFV one CL vase

"S/He also bought a vase (in addition to buying other things)."

6) ta ye mai le yi ge huaping.

3sg also buy PFV one CL vase

"S/He (in addition to some other people) also bought a vase."

(Li and Thompson, 1981:334)

2.1.1.6 Chu (Ms)

Chu's forthcoming monograph on Chinese discourse grammar represents his latest position on the connective functions of Chinese adverbs. His focus is on non-movable monosyllabic adverbs, which may also be categorized as modality adverbs. He illustrates these adverbs with three sets whose members share some similarities. Chu's first set includes *jiu* and *cai*. After reviewing previous studies on these two adverbs, Chu argues that sentences containing *jiu* and *cai* must occur in a context where an expected time/number/quantity exists, explicitly or implicitly. "The two adverbs do not just occur within the context of a simple proposition. They must follow from some condition, assumption, or expectation" (Chu, Ms:10). He concludes that "If most of the interpretations of the adverbs depend on the context in which the clauses occur, there can be no denial that the adverbs are mostly used for discourse cohesion/coherence" (Chu, Ms:13). He uses some graphic representations to illustrate the discourse functions of *jiu* and *cai*:

(1) Condition---Non-Temporal:

a) Necessary Condition---*cai*---> result

b) Sufficient Condition---*jiu*---> result

(2) Expectation:

- a) (Expectation)---*cai*---> scalar contrast
- b) (Expectation)---*jiu*---> simple contrast

(3) Condition---Temporal:

- a) Condition---*cai*---> later-than-usual realization
- b) Condition---*jiu*---> sooner-than-usual realization

(4) Assumption---Non-Temporal:

- a) (Assumption)---*cai*---> strong disagreement
- b) (Assumption)---*jiu*---> strong confirmation

(5) Assumption---Temporal

- a) Past time---*cai*---> immediate past
- b) Future time---*jiu*---> immediate future

(Chu, Ms:13-14)

The second set consists of three adverbs *bing*, *dao*, and *ye*. Chu points out that "They form a set because they share some semantic characteristics. All of them can be roughly translated as 'on the contrary' and they often occur in a negative context" (Chu, Ms:14). The interesting part about this set is *ye*. Ma and Lu (1985) claims that *ye* can express a 'mild tone', as in the following examples:

7) Ni ye tai bu keqi le.

you YE too not polite ASP

"(I think) you are quite too impolite."

8) Zhe shi ye zhihao you ta le.

this matter YE only by him/her ASP

"As to this matter, I think, there is no other way except leaving it to him/her."

(Ma and Lu, 1985:35)

The explanation offered by Ma and Lu for *ye*'s ability of expressing this kind of 'mild tone' is that it stems from *ye*'s basic function of indicating categorical similarity. Its presence in an expression of blame or complaint thus implies that the person mentioned is not alone. After examining more materials, Chu argues that "the rhetorical relations do not derive from the presence of *ye*; they rather come from the semantic contents of the clauses being connected. Nevertheless, all the examples share one thing in common: the notion of 'subjective opinion that is contrary to some assumption', which is exactly what *ye* adds to each of them" (Chu, forthcoming:18). Based on this observation, Chu forms the graphic representation for the discourse functions of this set as:

(6) *Bing*:

Assumption ---bing ---> Contrary-to-assumption as
objective observation

(7) *Dao*:

Assumption ---dao ---> Contrary-to-assumption as
desirable event/situation

(8) *Ye*:

Assumption ---ye ---> Contrary-to-assumption as
subjective opinion, which may
entail I BEG TO DISAGREE
(Chu, Ms:19)

The third set includes *you*, *hai*, and *zai*. Chu notes that both *hai* and *you* are deontic modality adverbs that express some attitude on the part of the speaker, whereas *zai* is not--it expresses only that the event is a repetition of a previous one

without making any comment. He further distinguishes you from *hai* as conjunctives: *hai* seems to stress the continuation of an event, and *you* seems to stress the repeated occurrences of two identical events. But a careful investigation leads him to some very insightful conclusions: When the events/situations linked by *zai* are identical, the adverbial connective presents them as repetitions. When they are not identical, the events/situations are explicitly presented as sequentially ordered. When the events/situations linked are identical, *hai* presents the second as a continuation of the first and presents both as repetitions of the same. When the events/situations are not identical, *hai* presents the second as an elaboration of the first and presents both as components of a whole. Thus his graphic representation of the discourse functions of these three adverbs are as follows:

(E/S = 'event or situation')

(9) *Zai*:

$E/S_i \text{ ----zai---} \rightarrow E/S_j$, where

- (i) *zai* indicates repetition if $i=j$, and
- (ii) *zai* focuses on the sequential order if $i \neq j$

(10) *Hai*:

$E/S_i \text{ ---hai---} \rightarrow E/S_j$, where

- (i) *hai* indicates continuation of the same E/S if $i=j$
- (ii) *hai* indicates further elaboration on E/S_i if $i \neq j$
- (iii) *hai* expresses 'undesirability' when a heavy stress is placed on it.

(11) *You*:

$E/S_i \text{ -----} \rightarrow E/S_j$, where

- (i) *you* indicates a recurrence of E/S_i , if $i=j$

- (ii) you indicates that E/S_i and E/S_j make up a larger whole E/S if $i \neq j$ and
- (iii) you expresses 'undesirability' when a heavy stress is placed on it.

(Chu, Ms:28)

Chu's monograph might be the most sophisticated and systematic synchronic description of Chinese conjunctive adverbs to date. It offers a solid base for the present study. However, it is not Chu's intention to investigate the process of grammaticalization of these adverbs. Therefore his study offers no answers as to why and how these words acquired their adverbial meanings.

2.1.2 Studies Exclusively on Chinese Conjunctive Adverbs

In the literature of Chinese linguistics, there are some publications exclusively dealing with the conjunctive adverbs relevant to the present study.

2.1.2.1 Wang (1956)

Wang Huan is one of a few most dedicated Chinese linguists who worked on Chinese adverbs. Her 1956 paper may be the earliest work on the synchronic relations between *jiu* and *cai*. The two words are contrasted in terms of time, quantity, condition, and aspect. And more importantly, Wang discusses at length the distributional discrepancy between *jiu* and *cai* when they are used in the sense of 'only'. The two seem to be synonymous when modifying a quantified NP, yet they are not equivalent in certain contexts. Wang claims that the use of *cai* in the sense of 'only' is prohibited in the following environment:

- a) when there is NO quantified NP in the predicate;

- b) when there IS a modal verb of ability/potential, such as 'can', before the predicate.

This observation was later termed as the 'discrepancy' problem (Big 1984:17). Wang does not give an adequate explanation for this problem other than suggesting that *cai* may refer only to already completed facts, but not to plans, commands, and future happenings.

2.1.2.2 Tsao (1976)

Tsao's work is a functional analysis of two Chinese adverbs *cai* and *dao*. He focuses on the role of 'expectation' in verbal behavior and claims that *cai* carries an implication pertaining to the speaker's anticipation. Tsao first distinguishes three related uses of *cai*:

*cai*₁: with a time or measurement clause, meaning 'just' or 'no more than';

*cai*₂: follows a clause of time, reason, measurement, or condition, and indicates that an action/state is achieved only after certain time, reason, or condition set by the preceding clause is obtained ('only then');

*cai*₃: a direct extension of the expectational aspect of *cai*₁ and *cai*₂, used to contradict the called-for response to the preceding speech act.

(Tsao, 1976:361-63)

To validate the three-way distinction, Tsao goes on to investigate the interactions between *cai*'s different uses and sentence-negation and sentence-refutation. As defined by Teng (1974), S-negation conveys a negative value to the whole

sentence, while S-refutation can be used to deny an utterance made by someone. For example:

9) Ta bu xiang lai. (S-negation)

he NEG want come

"He does not want to come."

10) Ta bu-shi yao sha ren. (S-refutation)

he NEG-BE want kill person

"It is not the case that he intends to kill people."

The use of *cai*₁, according to Tsao, may fall within, but not outside, the scope of S-refutation. *Cai*₁, on the other hand, may only occur outside the scope of S-refutation. The use of *cai*₂ is more constrained by real world conditions and "unless something can be achieved negatively, it is impossible for negation to occur within the scope of *cai*₂" (Tsao, 1976:370).

Given his finding about the role of expectation, Tsao concludes that grammatical descriptions should not take the sentence as the largest unit and that pragmatic factors such as 'expectation' have a far-reaching effect on syntax and semantics.

Tsao was the first to draw attention to the importance of 'expectation' in the analysis of Chinese adverbs, but he stops short of showing how expectation arises in a discourse context and how the use of *cai* is counter-expectational in nature.

2.1.2.3 Tseng (1977)

Tseng's study is concerned with the Chinese equivalents of the English conjunction *and*. He picks up *you*, *ye* and *hai/zai*, and considers them as VP-coordinators. But he does acknowledge that these four words are still adverbs despite their conjunctive functions.

According to Tseng, the function of the conjunctive adverbs *ye*, *you*, and *hai* is to "modify the predicate verbs of the sentence, implying that the actions are recursively operated at least one time" (Tseng, 1977:68). He further notes that the antecedent clauses connected by these adverbs "are often deleted by the speaker and all the information contained in these sentences is conveyed by the use of the conjunctive adverbs *ye*, *you* and *hai/zai*" (Tseng, 1977:69)

The syntactic behavior of these conjunctive adverbs is illustrated by Tseng in a figure:

	(S1)			S2		
	Subject	Verb	Object	Subject	Verb	Object
<i>you</i>	+	+	+	+	+	+
<i>ye</i>	-	+	+	-	+	+
<i>hai/zai</i>	+	+	-	+	+	-

Note: "+" for identical

(Tseng, 1977:70)

Figure 2.1 The syntactic behavior of *ye*, *you* and *hai/zai*

Ye differs from *you* in requiring the two conjoined sentences to take non-identical subjects; *hai* and *zai* differ from *you* in having non-identical objects in the clauses conjoined by them; *ye* and *hai/zai* differ from each other in both categories of subject and object.

Tseng goes on to treat *ye*, *you*, and *hai* as VP-coordinators. He claims that as VP coordinators they "convey a common semantic

reading, meaning that what follows these conjunctions is a further addition to the first conjunct" (Tseng, 1977:71). But again their syntactic behavior is different:

you occurs in the present form;

ye occurs in the future form;

hai occurs in the past form.

The difference can be seen in the following examples:

11) John yao chi fan ?you yao chi mian.

ye

?*hai*

John want eat rice want eat noodle

"John wants to eat the rice as well as the noodles."

12) John chi le fan ?you chi le mian.

?*ye*

hai

John eat ASP rice eat ASP noodle

"John ate both the rice and the noodles."

(Tseng, 1977:71)

The point made by Tseng here is not supported by the examples. Intuitively, the use of *hai* in sentence 11) and the uses of *ye* and *you* in sentence 12) are completely acceptable. It may not be a matter of syntax, but a matter of discourse context.

Tseng's other points are:

only *you* can occur with adjectives;

only *you* can occur in sentence-initial position

You and *ye* can be used inclusively or exclusively.

Again we have serious doubts as to the generalizations. It is easy to find *ye* in the sentence-initial position, but difficult to imagine that *ye* and *you* can be used 'exclusively'.

Tseng's work is not completely syntax-oriented. He acknowledges the different semantic behavior of *ye*, *you*, and *hai*, and notes the contextual influence on interpreting sentences. Unfortunately, he does not give a thorough analysis of the semantic aspect, nor does he make use of contexts to interpret *ye*, *you*, and *hai*.

2.1.2.4 Cheng (1983)

Cheng (1983) examines the parallel behavior of *jiu* and *cai* in Mandarin and Taiwanese. His basic observation is that *jiu* and *cai* encode different logical relations that are not expressed in English or Japanese by a single marker. *Jiu* is used to code a 'sufficient condition', which would normally require two connectives in English, 'if...then'. *Cai* encodes a 'necessary condition,' which would require in English a negative marker with a connective 'not...unless'. With regard to their grammatical status, Cheng argues that they are adverbs syntactically but connectives semantically, due to the fact that they are indeed used to mark a consequent clause, but never precede the whole sentence.

Cheng further states that the inherent logic-marking properties of *jiu* and *cai* enable them to be used in two other ways:

First, they may both function as an evaluative marker relative to scalar domains such as time, speed, frequency, and quantity, but they point to the opposite ends of the scale. *Jiu*

in general implies 'earlier, faster, more frequent, and more in amount than expected'. Cai, on the other hand, implies 'later, slower, less frequent, less in amount than expected.'

Secondly, they may both be used as a focus marker in an identifying sentence, such as:

13) Wo jiu/cai shi ouzhou ren.

I JIU/CAI be Europe person

"I am a European."

But they focus on different elements in the sentence. Jiu places focus on the following predicate, and thus 13) reads as 'I AM a European'. Cai focuses on the preceding subject, so the sentence reads as, 'I am a European.'

In his discussion of the emphatic usage of the two markers, Cheng relies heavily on jiu and cai's restriction of focus placement. However, the restrictions he proposes may be misleading. As also pointed out in Big (1984:48), Cheng fails to recognize two important aspects: 1) the possibility of placing focus on the subject with the use of jiu, and 2) the possibility for jiu and cai to occur as a focus marker in sentences other than the identifying type.

In his discussion of evaluative usage, Cheng points out one important distinction between jiu and cai: Jiu marks a situation (presumably the consequent) as easier than expected, while cai marks a situation as more difficult than expected. This semantic distinction proves to be significant with regard to the distributional characteristics of the two markers. However, Cheng does not link this distinction to the 'logical marking' properties that jiu and cai possess and there is a serious

problem with his claim that both evaluative and focus marking functions performed by *jiu* and *cai* are enabled solely by their 'inherent logical marking' ability. More recent studies show that without the proper discourse environment *jiu* and *cai* cannot perform these functions.

2.1.2.5 Teng (1983)

Teng (1983) considers the adverbs *ye*, *you*, *hai*, *zai*, and *zhi* 'quantifiers'. His focus is on both the scope of quantification and the hierarchy of scope.

On the scope of quantification, Teng suggests that *ye* is subject-oriented, object- or VP-oriented, and S-oriented; *you* is VP-oriented; *hai/zai* is strictly VP-oriented in comparison with *you*; *zhi* is subject-, VP-oriented. Some of his examples are given below:

- 14) Zhangsan mai le xin che; Lisi ye mai le xin che.

*you

*hai/zai

Zhangsan buy ASP new car Lisi buy ASP new car
 "Zhangsan bought a new car; Lisi also bought a new car."

- 15) Zhangsan mai le xin che he xin fangzi; Lisi zhi

Zhangsan buy ASP new car CONJ new house Lisi ZHI
 mai le xin che.
 buy ASP new car

"Zhangsan bought a new car and a new house; Lisi
 only bought a new car."

Pertaining to the hierarchy of scope, Teng notes the clustering of quantifiers and the incompatibility of certain quantifiers. He

claims that two quantifiers can not co-occur when there is a scope-clash, namely when the two quantifiers share the same scope. When two or more quantifiers are allowed to co-occur, there is an ordering-priority. The quantifier with wider scope will precede the one with narrower scope. For instance, *ye* or *zhi* must precede *you* when they occur in a single sentence:

- 16) Ta ye you chi le xia.
 *Ta you ye chi le xia.
 he eat ASP shrimp
 "He also ate shrimp again."
- 17) Ta zhi you chi le xia.
 *Ta you zhi chi le xia.
 he eat ASP shrimp
 "He only ate shrimp again."

Teng's study is completely syntactic. But it is hard to determine the use of the quantifiers without considering discourse factors. Thus his analysis can not be adequate.

2.1.2.6 Lu and Ma (1984)

Lu and Ma concentrate on two adverbs, *ye* and *hai*. They suggest that *ye* has two functions, one to express 'similarity', which is *ye*'s basic function, and the other to express a mild tone (mood of euphemism).

When denoting 'similarity' *ye* can have either content usage (*shiyong yongfa*) or empty usage (*xuyong yongfa*). The content use of *ye* covers three types of syntactic construction:

- A. X W, Y ye W => The coordinate complex clauses have different subjects but same predicate;

- B. $X W_1, X ye W_2 \Rightarrow$ The coordinate complex clauses have same subject but different predicates;
- C. $X W_1, Y ye W_2 \Rightarrow$ The coordinate complex clauses have different subjects and predicates.

(Lu and Ma, 1984:27)

In type A, *ye* is used to emphasize the similarity of Y to X in terms of an action, situation, or characteristic. For instance:

18) Ni qu, wo ye qu.

you go I YE go

"You go, and I go, too."

Lu and Ma claim that sentence 18) is, in fact, ambiguous because it expresses both coordinate and conditional relations. This ambiguity, however, may be resolved when some contexts are specified. For example:

19) A: [Zuihou jueding shei qu ya?]

at last decide who qu PART

B: Ni qu, wo ye qu.

you go I YE go

"A: Who is going to go by the last decision?

B: you go, and I go, too."

20) A: [Ni gan qu ma?]

you dare go PART

B: Ni qu, wo ye qu.

you go I YE go

"A: Do you dare to go?

B: (If)you go, I will go, too."

(Lu and Ma, 1984:27)

In type B, *ye* is used to emphasize that the position and function of W_2 is similar to that of W_1 in regard to *X*. In type C, *ye* is used to emphasize the similarity of *Y*'s situation W_2 to that of *X*'s W_1 . For instance:

21) Feng ting le, lang ye xiao le.

wind stop ASP wave YE small ASP

"The wind has stopped; the waves have become smaller, too."

The empty use of *ye* indicates that the similar items are either implicitly expressed or imaginary. In this usage, *ye* usually combines with other conjunctives to form pairs as illustrated below:

22) Ta suiran bu jige, ye bei luqu le.

he though not pass YE PASS admit ASP

"Though he did not pass (the exam), he was accepted (to a school), too."

Here, the item similar to the subject 'he' is not expressed explicitly, but one can imagine the reference is 'those students who passed the exam'. In this case, another conjunction such as *suiran* may co-occur.

Lu and Ma suggest that *ye*'s function of expressing a mild tone (the mood of euphemism) is derived from its basic function of expressing 'similarity'. Chu (Ms:17-18) argues that this function has more to do with 'subjective opinion that is contrary to some assumption' than with *ye*'s presence. We will argue later in chapter three, however, that both the semantic property of *ye* and the subjective opinion conveyed in the context contribute to the mood of euphemism. The modal use of *ye* is the final stage of

grammaticalization of the word. It is both *ye*'s basic meaning of 'equality' (or similarity) and a specific context (in which a subjective opinion contrary to some assumption is conveyed) that have motivated this process.

Though Lu and Ma acknowledge the role of context in defining the functions of *ye*, they underestimate its importance. In fact, it is context that indicates which items *ye* is comparing (Cf. Cheng, 1993).

As to *hai*, Lu and Ma label it as an 'adverb of degree'. The degree expressed by *hai* can be either 'greater' or 'lesser'. When the degree is lesser the clause containing *hai* conveys some unsatisfactory emotion; when the degree is greater, *hai* denotes 'supplementary addition' rather than a pure degree. For instance:

- 23) Jinggang shan you youmei de fengjing, fengfu
 Jinggang mountain have beautiful MD scenery abundant
 de chanwu, *hai* you guangrong de geming chuantong.
 MD product HAI have glorious MD revolution tradition
 "Jinggang Mountain has beautiful scenery and abundant
 resources as well as a glorious revolutionary
 tradition."

In 23), *hai* actually denotes additional information, in a different aspect, about the subject rather than a pure degree of its beauty or its productivity. We feel that using 'degree' to refer to these two functions is not appropriate. In fact, the so-called 'shallow degree' is the continuation of an undesirable situation from which the unsatisfactory emotion comes. For example:

24) Ta hai mei lai.

he HAI NEG come

"He is still absent."

As to the 'greater degree', it is, in fact, the function of additive focus. Though the additive sense of *hai* is derived from the meaning of continuation, it differs from the continuation not simply in degree.

2.1.2.7 Lu (1984)

In an attempt to establish a more rigid paradigm for distinguishing the adverbial functions of *jiu*, Lu takes the placement of stress and the semantic relevance of the stressed constituent to *jiu* into consideration. The basic function of *jiu* assumed by Lu is 'scope-limiting', which may be applied to either its preceding or following constituent. The limiting function of *jiu* is relevant to the preceding constituent, if the stress falls on that same constituent; but if the stress is on *jiu* itself, the adverb is relevant to the subsequent element, as illustrated in following examples, respectively:

25)a Women yi ge xiao zu jiu shi ge ren.

we one CL small group jiu ten CL person

"JUST IN OUR GROUP there are as many as ten people."

b Women yi ge xiao zu jiu shi ge ren

we one CL small group JIU ten CL person

"There are ONLY ten people in our group."

Lu claims that although the sentences 25)a and 25)b share exactly the same sequence of words, their difference in stress-placing leads to different interpretations. In sentence 25)a, *jiu* marks the limited scope of stressed, preceding element 'one group' in

relation to 'ten people'. In sentence 25)b, where the adverb itself is stressed, *jiu* marks the limited scope of 'ten people' in relation to 'our group'.

By differentiating the use of *jiu* in terms of its relevance to the stressed entity, Lu is able to give a more coherent explanation of the diverse functions of *jiu*. However, besides the fact that his notion of stress is rather perceptual than empirical and that the absolute stress is not always easy to detect, his reliance on stress is in some sense short-changes the exploration of contextual correlates that help determine the interpretation of *jiu*. As a matter of fact, the interpretation of sentence 25)a depends heavily on a counter-expectation context, while sentence b has a clear complaining mood. Moreover, taking *jiu* to be solely a limiting element loses sight of its other functions and the relationship between these functions.

2.1.2.8 Biq (1984, 1988a, 1988b)

Biq (1984) and (1988a) represent the most detailed work on the adverbs *jiu* and *cai*. Her comprehensive analysis provides an almost complete picture of the markers in the synchronic perspective.

In Biq (1988a), *jiu* and *cai* are first identified as "focusing adverbs, bearing similar but significantly distinguished kinds of focus: *cai* marks DENYING-EXPECTATION FOCUS, while *jiu* marks SIMPLE FOCUS" (77). More specifically, relevant to a given domain, *cai* asserts an unexpected value, whereas *jiu* simply asserts a value and recognizes it as one of the choices in the domain. The focusing function of *jiu* and *cai* is similar to the behavior of *even* and *only* in English.

Big then categorizes the various occurrences of *jiu* and *cai* into four types of usage. In each usage, *jiu* and *cai* place a different type of focus on some element involved in speech. The four types of usage are defined and illustrated below:

(1) Parametric Usage

DEF: *Jiu* and *cai* are used in a 'bipartite antecedent-consequent structure with the antecedent part being the parameter for obtaining the actuation of the event denoted in the consequent part" (1988a:79)

Focused element: the antecedent

Examples:

26)a Zhangsan chi san ge pingguo *jiu* bao.

Zhangsan eat three CL apple *JIU* full

"Zhangsan gets full after eating as few as three apples."

b Zhangsan chi san ge pingguo *cai* bao.

Zhangsan eat three CL apple *CAI* full

"Zhangsan gets full after eating as many as three apples."

(2) Limiting Usage

DEF: *Jiu* and *cai* can be glossed as 'only' and may place focus on various sentential elements.

Focused element: "the limited set of choices within a specific domain." (1988a:81)

Example:

27) Zhangsan *jiu/cai* kan wan le diyi zhang.

Zhangsan *JIU/CAI* read finish ASP first chapter

(a) "Zhangsan only FINISHED READING THE FIRST CHAPTER."

(b) "Zhangsan only FINISHED READING the first chapter."

(c) "Zhangsan only finished reading THE FIRST CHAPTER."

(3) Emphatic Usage

DEF: *Jiu* and *cai* indicate the speaker's evaluative or expressive voice in speech.

Focused Element: the whole sentence (the proposition in the sentence).

Examples:

28) Wo *jiu* *zhidao* *jingtian* *hui* *xiayu*.

I *JIU* know today will rain

"I knew it would rain today."

29) Zhangsan *de* *wenti*, wo *cai* *lan* *de* *guan* *ne*.

Zhangsan POSS problem I *CAI* lazy *DE* deal PRT

"As for Zhangsan's problem, I could care less."

(4) Temporal Usage

DEF: *Jiu* and *cai* are used with regard to time.

Focused Element: "the asserted time of the rated event in relation to the expected time of the narrated event."

(1988a:83)

Examples:

30) Q: Wanfan *sheme* *shihou* *hao* *de*?

dinner what time ready NOM

"When was dinner ready?"

a Wanfan jiu hao.

dinner JIU ready

"Dinner is ABOUT ready."

b Wanfan cai hao.

dinner CAI ready

"Dinner was JUST ready NOW."

Biq's example 30)a presents a problem. The question sentence is a simplified 'shi...de' construction, which indicates that the information before 'DE' is old or given, and the new information follows 'shi' immediately. That the dinner is ready is a fact known to both conversational participants; Therefore, an answer such as 30)a is impossible in this context.

After explaining the different usages, Biq further contrasts the two markers for each usage in terms of scalar implicature, derived from conversational and conventional principles in the Gricean paradigm (Grice, 1975). Relative to the parametric use, Biq's main concern is: Why is it, with the use of *cai*, that there is usually a scalar implicature involved and that the assumed value is always on the lower (smaller, fewer, or earlier) side of the asserted value?

To answer this question with regard to example 26)b, she makes the following claim:

When 'eating 3 apples' is asserted as the parameter for the person's attaining the state of being full, this value conversationally implicates the falsity of 'eating 2 apples' as the actuation point for attaining the same state.

(Biq 1988a:89)

Her argument goes as follows : Due to the conversational maxim that a conversational participant will be as informative as possible and make the strongest possible claim, when *cai* asserts the number '3', it necessarily denies other strong values (number less than '3'). As for scalarly weaker values such as '4' and above, she says: "It is entailed that his eating '4 apples' attains the same state. Thus, all values weaker than the asserted value can be regarded as pragmatically irrelevant by virtue of their triviality" (Biq, 1988a:90).

With regard to the use of *jiu*, Biq claims: "Unlike *cai*, *jiu* places simple focusing and does not address the relationship between the asserted value and the expected value of focus" (Biq, 1988a:91). But she does note that *jiu* could suggest a scalar implicature in which the expected value is always scalarly weaker than the asserted value.

Liu (1993) makes a detailed comment on Biq's position. Her problems with Biq's position are threefold. First, she feels that though Biq claims to give both a semantic AND a pragmatic account of *jiu* and *cai*, her analysis is essentially centered on the lexical semantics of the two words. The pragmatics of *jiu* and *cai*, in Biq's view, is only the implicational extension of their semantics. Therefore, Liu feels, Biq's concern is not how and why the two markers are chosen in a given moment, but what is implied by the semantics of the two markers. She concludes that although Biq's approach is valid and important, it lacks a coverage of the interactional mechanisms inherent in the communicative situation (Liu, 1993:47).

Secondly, Liu correctly points out that if *jiu* does not, as Biq claims, address the relationship between the asserted value and the expected value of focus, then, presumably, the scalar implicature must be independent of its use. In fact, Biq suggests that this implicature is established by asserting a numeral as a condition. But Liu proves that it is not true by substituting *jiu* with *hui*:

(31) Ruguo wo chi san ge pingguo wo hui hen bao.

if I eat three CL apple I will very full

"If I eat three apples, I will get very full."

(Liu, 1993:47)

Clearly, a scalar implicature is not established without the presence of *jiu*.

Liu questions Biq's claim that *cai* marks a denying-expectation focus, and often occurs in negative sentences. The example Liu uses to challenge Biq's position is:

(32) A: Ta hen xiaoqi ei.

he very stingy PRT

B: Dui a, ta cai xiaoqi ne.

right PRT he CAI stingy PRT

"A: He is pretty stingy.

B: Yes, indeed, he's as stingy as can be."

(Liu, 1993:48)

Third, Liu argues that the notion of 'focus' in Biq's study is defined entirely in semi-logical terms, detached from considerations of the actual discourse. It does not involve integration of dynamic discourse factors, such as the interaction between the speaker and hearer.

Though we agree with Liu in most aspects, some of her comments are not convincing. In our opinion, Liu's analysis of her example (32) is not accurate. That dialogue can not occur without a previous discourse in which two conversational participants talk about someone's stinginess. When the topic turns to 'ta (he)', B's reaction is "It is he who is really stingy (in comparison with the person they had talked about). Liu's interpretation of the dialogue totally ignores the context. If we take the context into consideration, the use of *cai* does have a close link with 'denying-expectation'. More problematic is her dissatisfaction with Biq's pragmatic analysis. Biq directly answers the question WHY and HOW *cai* acquired the function to indicate a scalarly higher value other than an assumed value. Her conclusion is that this process is a conventionalization of *cai*'s conversational implicature. This process is possible because of *cai*'s semantic property and a communicative relevant-principle that says people only tell their conversational partners what is relevant in the present context (cf Sperber and Wilson, 1986). Liu, on the other hand, demands that Biq answer the question "what kind of discourse context determines the choice of the two markers" (Liu, 1993:46). We think Biq has answered that question in her analysis. And she points out that *cai* expresses a denying-expectation focus and always appears in a negative sentence. Can these two points help to define the context in which *cai* may be used?

Biq (1988b) is a case study on Chinese adverb *you*. She examines the various uses of *you* in different textual/discourse environments and concludes that the grammatical function of *you*

is to 'accumulate relevant properties of for the same entity' or for short, the 'accumulation of relevance' (1988b:117).

She suggests that the basic function of *you* is placing focus on a conversational topic by extending its (*you*'s) own scope over the linguistic string in the same sentence that comments on the topic. The conversational topic can be located either within the same sentence, or in a neighboring sentence, or even in a sentence remotely positioned in relation to *you* and the comment.

The relevance accumulated by *you* can be from both *you* itself or discourse. As a focus adverb, *you* carries an implicature: the assertion of its scope over a linguistic string that comments on the conversational topic implicates the existence of another linguistic string in the text/discourse that also comments on the same conversational topic. The pragmatically established relevance that underlies the accumulation can be objective or subjective. Objective relevance, or the objective mode of accumulation, is a text-building process that connects properties of the same entity whose individual existence in the text/discourse is referentially verifiable and whose mutual relatedness is accountable in terms of empirical, external means. Subjective relevance, or the subjective mode of accumulation, on the other hand, establishes the property-accumulating process by manipulating the addressee's linguistic knowledge with respect to the implicature carried by *you*. When the subjective mode is in use, the implicated property is not necessarily discoverable from the text/discourse. However, couched in *you*'s conventional implicature, the subjective relevance can be successfully

established in conjunction with special types of conventionalized linguistic structures, such as rhetorical questions and sentence refutations, for getting the speaker's expressive/evaluative message across. For instance:

33) Ta you bu shi gui, ni pa shenme?

he YOU NEG be ghost you fear what

"(But) he is not a ghost! What are you afraid of?"

In 33), you conveys a meaning that can not be translated by 'again', nor by 'also', or by any other similar gloss for repetition or accumulation. But its emphatic reading can be easily recognized in conjunction with sentence refutation.

2.1.2.9 Cheng (1993)

Working within Mann and Thompson's Rhetorical Structure Theory, Cheng (1993) focuses on the connective functions of *ye*, *you* and *hai* in Chinese narrative discourse. Since RST provides a broader picture of discourse, Cheng is able to achieve some results that previous studies did not.

Based on Lu's (1977) observation, Cheng proposes some initial assumptions about the textural functions of the three connectives. Then she conducts an experimental survey of Mandarin native speakers, who filled out some selected texts in which the three connectives are left out. A statistical analysis of the survey and further rhetorical structure analysis of more written texts support most of Cheng's initial assumptions. The slightly modified assumptions are:

1. The conjoining Relation of *ye*, *you* and *hai*

- A. *Ye* is used when clauses to be connected are of equal rank.

- B. *You* is used when clauses to be connected are of equal rank AND their conjoining relation needs to be strengthened. What is being strengthened in the conjoining relation depends on consideration primarily of the discourse context, or of the implication expressed by the connected clauses.
 - C. *Hai* is used when clauses to be connected carry light-heavy distinction. The heavier clause advances the main line of the narrative and should be placed closer to the following context.
2. The contrastive Relation of *ye* and *you*
- A. *Ye* is used when two clauses to be connected look opposite in words, but are actually supplementary to each other in meaning.
 - B. *You* is used when two clauses to be connected look opposite in words, but supplementary to each other in meaning AND show the contradictory frame of mind on the part of the speaker.
3. The Substitutable Use of *ye*, *you* and *hai*
- A. The discourse context will exert influence on the speaker's choice of connectives.
 - B. How the speaker views the conjoined clauses will affect his choice of the connective.
 - C. To exhibit stylistic variation, the speaker tends to avoid the repeated use of the same connective, on condition that stylistic variation will not disrupt discourse coherence or twist the point of the story.

As to assumption 1.B., Chu (Ms) argues that you actually serves to connect two clauses that strengthen each other. Thus the force of strengthening comes from the components of a whole story (22), rather than from discourse context, as Cheng claims.

It is encouraging to see Cheng's efforts to analyze the adverbs in the framework of RST and some of her findings, for instance, the function possessed by *ye* and *you* to indicate contrastive relations between clauses. But it seems that Cheng does not define her notions clearly and that she analyzes data under an inconsistent theoretical guidance. For instance, she uses the term 'contradictory frame of mind' and elaborates upon it thus: "the situation described in the two clauses cannot both occur in reality; only one of them is the possible occurrence" (Cheng, 1993:53). The example she gives is:

- 34) *Wo ceng pan ta kuaikuai zhangda, shengpa buji jian ta*
 I ever wish he quickly grow up fear unable see he
chengren; you xiwang ta manman zhang, shengpa ta yumao
 adult YOU wish he slow grow fear he feather
fengman fei zou le, liuxia jimo de er lao.
 full fly away ASP leave lonely MD two old

"I once wished he would grow up quickly for fear that I would be unable to see him become an adult, but I also wished he would grow up slowly for fear that he would leave us two old persons when he grew full-fledged and flew away."

(Cheng, 1993:53)

We should be able to understand that the so-called 'contradictory frame of mind' simply represents conflicting wishes and has

nothing to do with the possibility of occurrence in reality of the two situations conveyed in the clauses. Because two situations assumed in Cheng's example could both possibly happen to the speaker. More troublesome is Cheng's distinction between 'fixed use' and 'substitutable use'. Cheng claims that the connectives *ye*, *you* and *hai* have both fixed usage and substitutable usage. The former is described as assumptions A and B. The latter is described as C. But in C, Cheng emphasizes that the substitutable usage is closely linked to both discourse context and speaker's views. A close reading of Cheng's chapter four reveals that a poorly designed experiment in which participants are asked to fill in removed connectives prompted some native speakers to substitute three different connectives. (It is well known that written text is decontextualized discourse). In fact, the materials used by Cheng are just short pieces of texts. Not surprisingly, readers judged the contexts differently and used different connectives substitutably. The materials are removed from the discourse contexts, providing no restrictions on choosing one of the three connectives. If Cheng had put the tested speakers in a real conversational situation, they would have had a very clear choice of connectives. The point is that in a very specific context only one word can best serve the discourse. (No two words can be completely synonymous if they have different forms).

2.1.2.10 Liu (1993)

Liu (1993) is the only inquiry on *jiu* and *cai* conducted in the framework of grammaticalization before the present study. Liu describes the two markers in both synchronic and diachronic

perspectives. Her synchronic investigation concerns the discourse functional distinction between *jiu* and *cai*, and their distributional characteristics.

The discourse functional distinction between *jiu* and *cai* is categorized in two functions: linking and limiting. As linking elements, *jiu* and *cai* are distinct in terms of their correlations with the following factors:

- a) Strength of presuppositionality
- b) Propositional status of the consequent
- c) Focus coding with a contrastive antecedent
- d) Expectational orientations

According to Liu, the use of *cai* is to counter a presupposition regarding the actualization of the consequent by asserting a contrastive antecedent. It therefore sets higher demands on all the above correlates. The use of *jiu*, on the other hand, is mainly to assert a direct relation between an event/state and a reference time, or between an antecedent-consequent pair. It may or may not be counter-expectational, depending on the instantiation of the above parameters. If it does express a counter-expectational sense, the difference between *jiu* and *cai* can be further illustrated as the following:

JIU	CAI
<----->	
earlier	later
less demanding	more demanding
less surprising	more surprising

(Liu, 1993:137)

As limiting elements, the two markers are distinct in terms of the way they place focus on the relevant constituent. *Jiu* limits the scope of choices by singling out one candidate, whereas *cai* signals a scalar contrast by asserting an unexpected, extreme value on the opposite end of a scalar domain. Thus Liu calls *jiu* 'a scope quantifier' and *cai* 'a degree' intensifier. Liu notes that *jiu* often combines with *shi* (the copula) in its limiting use to make a clear identification or confirmation that excludes other possibilities. For instance:

35) *Wo jiu shuo ma, jiushi ren shao de yuangu.*

I JIU say PRT JIUSHI people few MD reason

"I said exactly (this); it is exactly due to the small number of people."

(Liu, 1993:137)

Liu points out that here *jiushi* can actually be considered a lexicalized whole. As to the reason why *shi* is selected in this combination, Liu quotes Li and Thompson as saying that *shi* may be used in presentative sentence or to signal a specific affirmation that asserts a statement in the preceding discourse (Li and Thompson, 1981:151-54).

Another point made by Liu is that sometimes *jiu*'s limiting and linking functions can converge. In this case, *jiu* serves to introduce an explanatory clause, whose primary function is to 'limit' the interpretational scope of a prior proposition. For example:

36) *Ta shuo ta jihu dou meiyou shenmo tiezhi le,*
he say she almost DOU NEG any iron CRS
jiushi pin xue pin de hen yanzhong

JIUSHI lack blood lack CSC very serious.

"He said that she had almost no iron, which means she has very serious anemia."

(Liu, 1993:138)

In this case *jiushi* can not be reduced to *jiu*. Therefore, we are hesitant to give the credit to *jiu* itself. But *jiushi* (or the reduced form *jiu*) may introduce a clause or a NP that helps to identify or characterize the referent of a previously mentioned NP:

- 37) [Neige shenmo Lin a]? *jiu* congqian zhu zai women
 that what Lin PRT JIU before live at our
 houmian de...*jiushi* gen Xiaodai jiebai jiemei de
 back NOM JIUSHI with Xiaodai swear sister NOM
 neige.
 that

"That Lin something (what's her name)? Just the one who lived behind us before, just the one who became a sworn sister of Xiaodai."

(Liu, 1993:139)

Liu suggests that signaling a referential link between the following NP/clause and the preceding one, *jiu* and *jiushi* function as linking devices that relate the two entities, both structurally and semantically.

As to the distributional characteristics, Liu observes that the discourse functions of *cai* are more restricted and highly marked, while *jiu* has unmarked status and occurs freely in discourse. She further illustrates this distinction by showing

their co-occurrence restrictions or preferences with sentence-final particles:

- a) *Cai* as a linking element is not preferred to occur with the perfect aspect marker *le* in its consequent clause, due to their incompatibility in presuppositional strength.
- b) *Cai* as a limiting element is preferred to occur with *ne*, the marker of contrast, due to the similarity in their characteristic discourse functions.
- c) *Jiu* as a limiting element is preferred to occur at the end of a discourse unit with the particle *ma*, to ensure information assertion and transition.

These points can be seen in following example:

38) Che huai le, ren zenmo hui shuai xiaqu a, wo cai
 car break ASP person how will fall down PRT I CAI
 bu xin ne.
 NEG believe PRT

"If (their) car broke down, how could they fall down from the car. I DON'T buy your story."

(Liu, 1993:166)

In this example, the use of the sentence-final particles *le* or *ma* is impossible.

Liu's synchronic description of *jiu* and *cai* is quite sophisticated. Her analysis of the distributional characteristics of the two markers and her attention to the close linkage between *jiu* and *shi* are of special interest to the present study. But we feel that there are some inconsistencies and shortcomings in Liu's work. First Liu characterizes *jiu* and *cai*'s discourse

functions in terms of limiting and linking. But some of her examples obviously cover the modality functions of the two markers, particularly when she talks about the co-occurrence of *jiu* and *cai* with sentence-final particles, and the combination of *jiu* and *shi*. For instance, in 38) *cai* expresses the speaker's strong negative attitude toward the story. Without this modality sense, it is impossible for *cai* to co-occur with particle *ne*. More importantly, ignoring their modality functions, it would be very difficult for Liu to figure out the relationship between the limiting function and linking function that *jiu* and *cai* possess. Maybe that is why she does not discuss the topic. Secondly, Liu's description of the distributional characteristic of *jiu* and *cai* is claimed to further clarify their discourse environment. But she limits herself to only sentence-final particles. We are not saying that the co-occurrence with particles can not contribute to this purpose. The point is that she fails to examine the broader issue, the real discourse structures in which these two markers occur, for instance, rhetorical structures, clause chaining, the types of clause, etc.. This deficiency causes the discourse analyst to depend heavily on semantic content, thereby contributing little to accounting for the correct use of the markers. Thirdly, some of Liu's examples as well as her interpretation are problematic. For instance:

39) Wo yiwei ni chi liang-wan *jiu/cai* bao ne.

I think you eat two bowl JIU CAI full NE

"I thought you would be full as long as /only if you ate two bowls."

Though Liu acknowledges that 39) is a 'dispreferred' sentence, she considers it well-formed. This statement is not only inconsistent with Liu's general description of the two markers' distributional characteristic but also against our intuition. It is very hard to use *jiu* with the particle *ne* in the same clause. The appropriate particle for *jiu* is *le*, as the following example shows:

40) Wo yiwei ni chi liang wan *jiu* bao *le*.

I think you eat two bowl *JIU* full *LE*

"I thought you would be full as soon you ate two
bowls (of rice)."

2.1.1.3 Summary of Synchronic Studies Reviewed

With regard to their ultimate goals, there are two types of synchronic studies of Chinese conjunctive adverbs. Most work completed before the mid-1980s is predominantly description-oriented, carried out at sentence level and concentrating on differentiating and categorizing the multiple senses of the adverbs, without much concern for explanations (e.g. Wang, 1947, 1956; Chao 1968; Alleton 1972; Ma and Chang 1980; Lü, 1980; Li and Thompson 1981; Chu, 1983). Some work done before the mid-1980s did try to analyze the semantic diversity of the adverbs, but failed to offer a unified explanation due to their exclusion of discourse factors (e.g. Tseng, 1977; Lü, 1977; Lu and Ma 1984). Later studies are devoted more to providing a systematic explanation. In doing so, they usually go beyond sentence-level syntax and make use of certain non-structural principles, such as 'expectation' (Tsao, 1976; Chu, Ms), semantic relevance between constituents (Lu, 1984), 'relational values' between the asserted

and the expected (Paris, 1987), 'focus' and 'conversational implicature' (Biq, 1984, 1988), 'rhetorical structures' (Cheng, 1993) and 'conversational mechanism' (Liu, 1993). In terms of discourse analysis, we find that Cheng (1993), Liu (1993), and Chu (Ms) are more refined than the other studies. Cheng works in the RST framework, which enables her to reveal the relations between clauses connected by the Chinese conjunctive adverbs *ye*, *you* and *hai* not only semantically but structurally. Liu efficiently employs the conversational data to reveal how people use communicative mechanisms to build up their presupposition, expectation, and focus as well as to choose the proper adverbs to decode them. Based mainly on the content of discourse contexts, Chu's study offers an insightful analysis of the discourse environment of the Chinese modality adverbs. He carefully reveals how each component of a discourse contributes to the building of the speaker's expectation, preference, undesirability, etc. However, Cheng leaves some conjunctives untouched, and her analysis is not very consistent; Liu ignores semantic relatedness among the different functions of *jiu* and *cai*, and her distributional analysis misses some important discourse structures that reflect iconicity and grammatical markedness. Chu also does not discuss specific discourse structures.

Our synchronic analysis starts with the observation made by Cheng (1993), Liu (1993) and Chu (Ms). We then analyze Chinese conjunctive adverbs at two different levels, namely discourse and sentence. At the end of the chapter, based on our result and the theory of semantic relatedness, we hypothesize a grammaticalization chain for each of the adverbs. These

grammaticalization chains will be further tested using historical evidence in Chapter 3.

2.2 Synchronic Description of Chinese Conjunctive Adverbs in Grammaticalization Perspective

2.2.1 Content Meaning vs. Functional Meaning: *jiu*, *hai* and *cai*

Though in contemporary Chinese, *jiu*, *hai* and *cai* mainly function as adverbs, their content meanings are obvious. A number of previous studies have suggested that the adverbial meanings possessed by *jiu*, *hai* and *cai* are derived from their content meanings (Liu, 1993; Yeh, 1995). Concerning content meaning, *jiu* is a transitive verb that means 'to approach'. *Hai* has two content readings: one is transitive, meaning 'return something to somebody; the other is intransitive, meaning 'return from someplace', just like its English counterpart 'return'. Note that as a content word *hai* is pronounced [huan], which is different from its functional reading [hai]². *Cai*, as a content word, is a noun that means 'ability' or 'talent'. These words' content meanings are demonstrated in the following examples from 41)a through d:

41)a Qing ge wei *jiu* can ba.

please each CL JIU dinner PRT

"Everybody take a seat at the dinner table, please."

b Wo lai huan ni de shu.

I come return you POSS book

"I come to return your book (to you)."

c A: Ni xiatian gan shenmo?

you summer do what

B: Huan xiang tan qin.

return county visit parents

"A: What are you going to do this summer?

B: I go home to visit my parents."

d Zhei ge ren you gan cai, mei you shuai cai.

this CL person have do talent NEG have lead talent

"This person has the talent to do things himself, but he
has no talent to lead others."

We have to point out that though *jiu*, *cai*, and *hai* still have content meanings, their use is highly restricted. They are used either in very special settings or in compounds and formulas. For instance, as a content word, *jiu* is only used in special expressions, such as *jiu can* 'approach dinner', *jiu wei* 'take your position', and *jiu yi* 'sacrifice for justice'. These expressions are very formal and used in official settings like a banquet ('*jiu can*') or sporting competition ('*jiu wei*'). *Cai* is hardly used independently. We find it mostly in compounds or near-compounds, such as *caineng* 'ability', *tian cai* 'genius' etc.. As a content word in the sense of going back to a place, [*huan*] is only found in frozen expressions such as *huan jia* 'go home' or *huanxiang* 'go home'. As a matter of fact, [*huan*] is constantly losing its ground to a more colloquial word *hui*, which has the same content meaning.

Besides *jiu*, *cai* and *hai*, other words with which we are concerned in this study have no content meanings. From now on, we will focus on the adverbial meanings these words possess.

2.2.2 Chinese Conjunctive Adverbs in Discourse

In this section we describe the Chinese conjunctive adverbs *jiu*, *cai*, *zhi*, *ye*, *you*, *hai*, and *zai* at the discourse level. Our description covers narrative, expository, and conversational

discourses. The first two are described in the framework of Rhetorical Structure Theory (RST).

We start with the results in Cheng (1993), Liu (1993), and Chu (Ms). Based on their observations, we hypothesize:

1. *Jiu* expresses a direct relation between an event/state and a reference time, or between the members of an antecedent-consequent pair. It asserts a lower relational value than the assumed value, and therefore strongly confirms the assumption.
2. *Cai* expresses a scalar relation between an event/state, and a reference time, or between the members of an antecedence-consequent pair. It asserts a higher relational value than the assumed value, and therefore strongly disagrees with the assumption.
3. *Zhi* expresses an adversative turn in the flow of the speech.
4. *Ye* connects clauses that are of equal rank. It may express a contrast to an assumption.
5. *You* connects clauses of equal rank and complementary to each other. When *you* is stressed, it expresses undesirability.
6. *Hai* connects clauses that are parts of the same continuous event/state or parts of two different events or states.
7. *Zai* expresses the repetition of the same event or the sequence of the different events.

2.2.2.1 Chinese conjunctive adverbs in narrative discourse:

Our data on narrative discourse includes a transcript of one tape-recording in which an elementary school student from Beijing³ tells her stories at school and some texts cited from current Chinese writers who are native 'Beijingsese.'

Two things within Mattiessen and Thompson's model will be justified simultaneously (i) the relations among the connected clauses; (ii) the relations between the connected clauses and their adjacent (preceding/following) ones.

A Typical RST diagram basically represents two types of text relations. One is the "Nucleus-Satellite" relation, and the other is the "List" or "Joint" relation, as illustrated below:



In a "List" relation, the clauses X and Y are coordinated to each other; while in a "Nucleus-Satellite" relation, the Satellite clause Y is subordinated to the "Nucleus" clause X. The specific relation between nucleus clause and satellite clause is indicated above the arch which links them, and the arrow of the arch points to the nucleus clause. For instance, in the diagram on the right side above, the relation between the two clauses is indicated by the arrow first, which tells us that X is the nucleus clause and Y is the satellite. Then, the specific relation between nucleus and satellite clauses is further marked as "condition" by the word above the arch that links them, which means that the

satellite clause states the condition under which the action stated by the nucleus clause can be carried out.

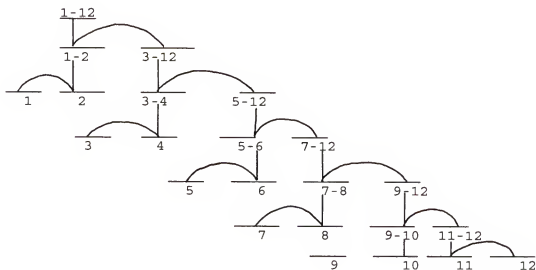
First, let us examine some portions from the student's story.

- 42)a 1. Youyihui shang yuwen ke,
 once have literature lesson
2. women Yang laoshi gei women chao xin ci.
 our NAME teacher for us copy new word
3. Ta ne, gen women shuo:
 he PRT to us say
4. "Ba xin ci xie zai shu biar de kong dang
 PRP new word write in book edge MD blank space
 li."
 inside
5. Ta gang shuo wan,
 he just say finish
6. Zhoushan jiu shijir xiao.
 NAME JIU hard laugh
7. Laoshi ting le, tebie shengqi,
 teacher hear ASP very angry
8. jiu guoqu wen ta:"
 JIU go over ask him
9. Zhoushan, le shenmo ni le?"
 NAME laugh what you laugh
10. Zhoushan ta haishi le.
 NAME he HAISHI laugh
11. Laoshi tebie shengqi,
 teacher very angry

12. jiu na yuwen shu zai ta tou shang qiao
 JIU take literature book on he head LOC knock
 le haoji xia.
 ASP several time

"One day, we were having a language/literature class. Our teacher, Yang, had us copy new words. She said to us: "Write the new words in the margins of your book." Just as she finished talking, Zhoushan started laughing uncontrollably. The teacher, becoming very angry, went over to Zhoushan and asked: "What are you laughing about?" Zhoushan was still laughing. The teacher was so angry that she hit Zhoushan with the language/literature book on the head several times."

On the basis of RST introduced in section 1.3.2.2, the passage above can be analyzed for its rhetorical structure as follows. Each number represents its corresponding clause in the passage.



10. ta jiu bu ku.

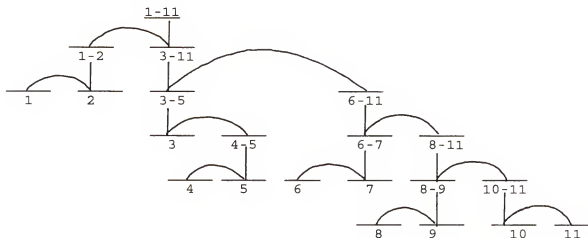
he JIU NEG cry

11. Hai jiezhe gen renjia shuohua

HAI continue with others talk

"Sun Zhichen always talks to other students during class. Our teacher, Ms. Yang, became very angry at him and said: 'If any of you want to talk, I will not bother to talk anymore.' If other students were criticized by the teacher like that they would be so ashamed they would cry. Sun Zhichen's grades are really bad, he is completely shameless. He did not cry and [even] continued talking to others."

The rhetorical structure of this portion of the story is demonstrated below:



Jiu is used in clauses 2, 3, 5, 7 and 10; hai is used in clause 11. Clause 2 states the resulting mood of the teacher after she observes that one student, Sun Zhichen, kept talking with other students. Clause 3 states the resulting action after the teacher gets angry with the student. Clause 5 states the teacher's intention under the condition that the students keep

talking to each other. Clause 7 states a normal consequence under the condition that a student is criticized by a teacher in a class. Clause 10 states a result caused by the given cause in preceding clauses with a contrast to the normal reaction students should have to their teacher's criticism. Clause 11 states the same behavior of the student after the teacher had criticized him. Therefore, in 45)b, a portion of the story told by an elementary student from Beijing, *jiu* is used to indicate causal and conditional relations, and a result which somewhat contrasts with the speaker's expectation; *hai* is used to indicate the continuity of an action that is undesirable to the speaker and therefore has a concessive relation to the preceding text.

42)c. 1. Yang laoshi shuo:

NAME teacher say

2. "Nimen yao bu ai shang ke,
you if NEG love take class

3. *jiu* chu qu,
JIU exit go

4. hui jia qu."
return home go

5. Ranhou ne, *jiu* ran tamen shoushi shubao.
then PRT JIU ask them pack backpack

6. Zhangjian he Jiangfeng *jiu* bu zou.
NAME and NAME JIU NEG go

7. Zhangjian *haishi* ge ting hao de xuesheng ne,
NAME HAISHI CL pretty good MD student PRT

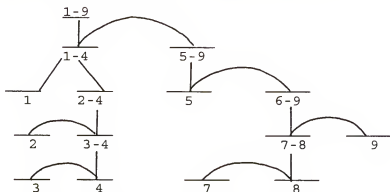
8. ranhou ta *jiu* ku le.
then he JIU CRY PRT

9. Jiangfeng ye youdiar bu gaoxing.

NAME YE little bit NEG happy

"Yang, the theacher said: 'If you don't like to be in class, then get out, go home.' She then asked them to gather their books up. Zhangjian and Jiangfeng just wouldn't move. Zhangjian actually was a pretty good student, he then started crying. Jiangfeng was not happy either."

The rhetorical structure of this example is as follows:



Jiu is used in clauses 3, 5, 6 and 8; ye is used in clause 9; haishi is used in clause 7. Clause 3 states a consequence under the condition given in the preceding clause that if the students don't want to stay in the class, clause 5 states the resulting directive given by the teacher. Clause 6 states the resistance on the part of two students after they were asked to leave the class. This attitude is contrary to the speaker's expectation. Clause 8 states a result caused by one student's character. Clause 9 states the similar mood of the other student. Clause 7 provides a different background to one student's (Zhangjian) behavior. Therefore, functionally jiu is used to indicate conditional and causal relations, and a resisting attitude contrary to one's expectation. Ye is used to indicate

the similarity between two persons in certain aspect. *Haishi* is used to provide some background contrary to the speaker's expectation based on the current facts, and therefore offers a concessive sense.

As we can see, sometimes it is difficult to distinguish sequential, causal, and conditional relations. If we recall the metaphorical extension model proposed by Heine and his associates, we should not be surprised by the difficulty. According to that model, sequential relation is a basis for both causal and conditional relations.

41)d. 1. Tongxue men dou shuo rang Zhangjian he Jiangfeng
classmate PL all say let NAME and Name
zou
go

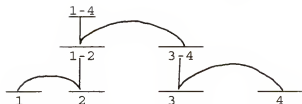
2. zuo zai zhouwei de jige ren hai gei tamen liar
sit at around MD some person HAI for them two
shoushi shubao.
pack backpack

3. Zuihou, Zhangjian gen Jiangfeng dou chu qu le,
at last NAME and NAME all exit go ASP

4. Yang laoshi cai lai le."
NAME teacher CAI come ASP

"The students all urged Zhangjian and Jiangfeng to leave the class. Some classmates who sat around Zhangjian and Jiangfeng even gathered up the backpacks for them. At last, they left. Only after that did the teacher, Ms. Yang, come back."

The rhetorical structure of 42)d is as follows:



Hai is used in clause 2; *cai* is used in clause 4. Clause 2 states the further action taken by other students against the two students who were asked to leave the class. Clause 4 states the consequence only after the two students who were talking in the class had left the classroom. It is apparent that *cai* is used to indicate both sequential and sufficient conditional relations, and *hai* is used to indicate a sequence in which the second part is a further development of the first part.

So far all examples are taken from the transcript of an elementary student's oral story. Now we turn to some examples taken from modern Chinese literature.

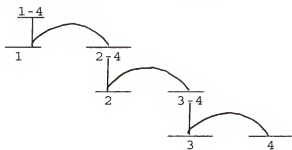
- 43) 1. Nimen cong 'Bai hua shichang' zhuan wan
 you from hundred flower market wonder finish
 chulai
 exit
2. you jin le 'Douhuazhuang',
 YOU enter ASP RESTAURANT NAME
3. yi ren chi le yi wan 'Longchaoshou',
 each person eat ASP one bowl FOOD NAME
4. you he chi le yi die 'Ye-erba'.
 YOU share eat ASP one dish FOOD NAME.

"(I saw) you two come out of 'Hundred Flowers Market' and then walk in 'Douhuazhuang', there each of you had

a bowl of 'Longchaoshou' and shared a dish of 'Ye-erba."

<The Story of the Editor's Office (Wang Shuo:57)>

The rhetorical structure of this episode is as follows:



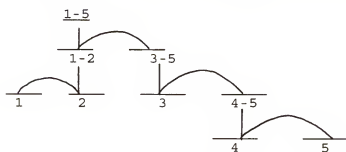
You is used in clauses 2 and 4. Clause 2 states the second stop during the two characters' outing, and clause 4 states the second dish they had at a restaurant. Therefore, it is very clear that the major function of you is to indicate the further development of sequential events. The use of you in clause 4 has an obvious sense of 'in addition'.

- 44) 1. Shi fenzhong hou,
ten minutes after
2. ta lai le.
she come ASP
3. hai chuan zhe tuoxie,
HAI wear ASP slippers
4. zhishi ba shuiqun huan le,
but PRP pajamas change ASP
5. you chuan shang ta nei tiao guo lü se de
YOU wear on her that CL apple green color MD
duanku
shorts

"Ten minutes later, she showed up. She was still wearing her slippers, but had changed her pajamas and was in her apple-green colored shorts again."

Wang Shuo <Die After Having Some Fun:12>

The rhetorical structure of example 44) is as follows:



Hai is used in clause 3; *you* is used in clause 5; *zhishi* is used in clause 4. Clause 3 states what is the same in the girl's dressing. Clause 4 states the only change she made in her dressing. Clause 5 states what she had worn before. Functionally, *hai* indicates the continuity of the same state of being; *zhishi* indicates an adversative relation, and *you* indicates the repetition in her clothing which was seen before. Since sequence is the most important indicator of the relations between clauses in narrative discourse, the functions of Chinese conjunctive adverbs in narrative discourse are relatively easy to see. The situation in expository and conversational discourses is more diverse and subtle. We will discuss expository discourse first.

2.2.2.2 Chinese conjunctive adverbs in expository discourse

In this section, our data are taken from written texts, but some are highly colloquial in style.

45) 1. Women cengjing shuo guo,

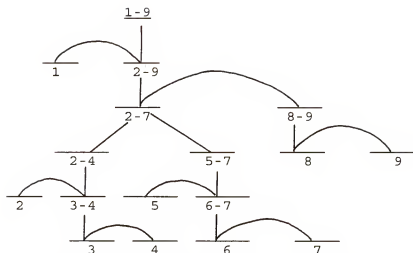
we once say ASP

2. fangzi shi yinggai jingchang dasao de,
house SHI should frequent clean NOM
3. bu dasao
NEG clean
4. jiu hui ji man le huichen;
JIU will accumulate full ASP dust
5. lian shi yinggai jingchang xi de,
face SHI should frequent wash NOM
6. bu xi,
NEG wash
7. yejiu hui huichen man mian.
YE JIU will dust full face
8. Women tongzhi de sixiang, women de gongzuo ye
we comrade POSS thought we POSS work YE
hui zhanran huichen de,
will contaminate dust PRT
9. ye yinggai dasao he xidi."
YE should clean and wash

"We have said in the past, (our) house should be frequently cleaned, otherwise it will be full of dust; (our) faces should be frequently washed, otherwise they will also be dusty. Our comrades' brains and our enterprise might be contaminated with dust as well, they should be frequently cleaned and washed."

Mao Zedong <On United Government>

Mao's famous brain wash statement is known to be rhetorically well organized. Its structure is illustrated as follows:



Jiu is used in clauses 4 and 7; *ye* is used in clauses 7, 8 and 9. Clause 4 states the consequence under the condition that we don't clean the house frequently. Clause 7 states a similar consequence under the similar condition as clause 4. Clause 8 states a similar possibility in a metaphorical sense. Clause 9 states a conclusion based on the reason provided by clause 8. Therefore, functionally *jiu* is used to indicate conditional relations; *ye* indicates the similarity between things in comparison. But the purpose of the comparison is not only to tell the similarity between two things but to highlight the characteristic of the second thing in comparison. Mao tells us the similarity between cleaning house, washing one's face and brain washing. His purpose is to emphasize the necessity of brain washing.

- 46) 1. Ni bu tan,
you NEG talk

2. na jiu wo shuo.

then JIU I say

3. Zong zhemo nao xiaqu,

always such fight ASP

4. ye mei yisi.

YE NEG sense

5. Wo xiang le, zeren ye bu quan zai ni

I think ASP responsibility YE NEG entire due you ,

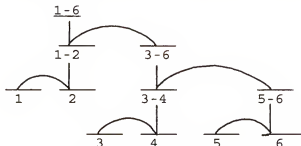
6. dang chu women jiehun jiu youxie caoshuai.

at beginning we marry JIU some rash

"(Since) you don't want to talk, I will say something. It is meaningless for us to fight all the time. I have been thinking, the responsibility (for this) is not entirely yours. We got married quite hastily, to begin with."

Wang Shuo <Die After Having Some Fun>

The rhetorical structure of 46) is diagramed below:



Jiu is used in clauses 2 and 6; ye is used in clauses 4 and 5. Clause 2 states a result caused by clause 1. Clause 6 gives the reason why the responsibility of failing marriage is not entirely that of the wife. Clause 4 states the consequence under the condition that the couple fight all the time. Clause 5 states the change in the husband's tone, which shows that he is willing to bear partial responsibility for the failing marriage.

Therefore, *jiu* indicates causal relation and *ye* indicates conditional and adversative relations. There are a couple of aspects in 46) that are interesting and worth special attention. First, in clause 2, *jiu* appears before the subject *wo* ('I'), rather than in its typical position between the subject and verb. Note that in this case a demonstrative *na* ('that') precedes *jiu*. Like all demonstratives, *na* represents a preceding element or piece of text and carries out a decisive or conclusive voice. This type of voice signals the strong causal relation between the preceding text and what follows. The strong relation demands higher markedness. Therefore, *jiu* precedes the subject *wo* and functions almost like a pure conjunction instead of a conjunctive adverb. (cf. Chu, 1991; Liu and Chu, 1993) Secondly, *ye*'s function to indicate an adversative relation seems related to its 'mild tone' (Lu and Ma, 1984). The adverbial 'not entirely' clearly indicates that the wife is not solely responsible for the failing marriage. In this case we agree with Lu and Ma (cf. Chapter one). *Jiu*'s function to indicate 'reason' (clause 6) is obviously related to a sense of regret, namely the attitude of the husband. This attitude is indicated in his comment on their marriage which is 'meaningless' to him. Without the negative comment in the preceding discourse, *jiu* would not be used in this modal sense.

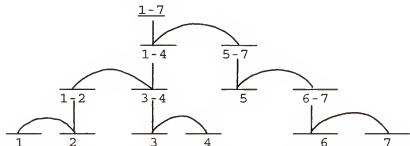
- 47) 1. *Wo yaoshi shuo xiang,*
 I if say miss
 2. *ni ye bu hui xiangxin;*
 you YE NEG will believe
 3. *wo shuo bu xiang,*
 I say NEG miss

4. ni you bu yuan tingdao.
you YOU NEG want hear
5. Wo shenmo dou bu yao le
I what DOU NEG want ASP
6. hai bu shi wei le ni?
HAI NEG SHI for ASP you
7. hai rang wo shuo shenmo?
HAI let me say what

"If I said I miss (my former wife), you would not believe it. If I said I don't miss (her), you would not listen. Haven't I sacrificed everything for you? What else do you want me to say?"

Lü Xin <Our Store> Master 1994, 3:125

The rhetorical structure of 47) is illustrated as follows:



Ye is used in clause 2; you is used in clause 4; hai is used in clauses 6 and 7. Clause 2 states a consequence under a concessive condition; clause 4 states a consequence under a condition, and both the consequence and condition are contrary to clause 1 and 2. Clause 6 and 7 state reasons for an action. Therefore, in 47) ye indicates a concessive condition; you indicates both condition and contrast; hai indicates reason in a strong confirmative voice. But note that this strong confirmative voice

is closely linked to the form of a rhetorical question. We will come back to this point later.

In sections 2.2.2.1 and 2.2.2.2 we have demonstrated the conjunctive function of Chinese adverbs using the model of RST. Some important findings are summarized here. First, in terms of clause relation, *jiu* is used to indicate sequential, causal, conditional, and contrastive relations; *ye* is used to indicate conditional, concessive conditional, and adversative relations; *hai* is used to indicate causal, elaborational (continuity or further development), and concessive relations; *you* is used to indicate sequential, developmental, conditional and contrastive relations; *cai* is used to indicate sequential and conditional relations; *zhishi* is used to indicate adversative relation; *haishi* is used to indicate contrastive relation with a undesiral tone. Secondly, in Chinese, the word order, particularly the clause order, is relatively fixed. The fixed clause order seems to reflect the iconicity of the real world. This order certainly is obvious in narrative discourse. But even in expository discourse, Chinese clause order is still highly iconic. This iconicity can be easily seen in 2.2.2.2 in which the rhetorical structure of Chinese is diagrammed. In all the examples, conditional, concessive conditional, and causal clauses precede consequent clauses. Therefore, we would consider the grammaticalization of conjunctive adverbs a minimal grammatical markedness of iconicity. This point can be further observed in the fact that though conjunctions may be paired with conjunctive adverbs to indicate the relations between clauses, as long as the iconicity is respected, they are not necessary and are frequently

omitted. This is true even in expository discourse, as we can see the point in Mao's brainwash theory (example 45). Third, when two clauses are closely linked, it is impossible to use a conjunction to co-occur with conjunctive adverbs. In this case the conjunctive adverb represents the only option open to a speaker desiring to indicate the relation between two clauses. This point can be seen in 2.2.2.3 and is supported by the typology of clause combination proposed by Lehmann (Lehmann, 1988), who claims that the more closely two clauses are linked, the fewer conjunctive markers they contain. Fourth, since Chinese is a topic-prominent language and clause chaining is very common in the use of the language, whenever clause chaining occurs, the subjects of the clauses are omitted (Givon, 1993), and consequently conjunctive adverbs can occupy the clause-initial position, which is the most discourse active position. The appearance at clause-initial position reinforces the grammaticalization of conjunctive adverbs and is crucial for their further development into conjunctions (Liu and Chu, 1993). Thus, in terms of distribution, Chinese conjunctive adverbs are closely related to clause-chaining, closely linked clause, and rhetorical questions. We will further elaborate on these points in the next section.

In the next section we will also attempt to show how people use different mechanisms to build up discourse in conversation and negotiate the meaning of conjunctive adverbs in a specific discourse.

2.2.2.3 Chinese conjunctive adverbs in conversation

After analyzing a fairly large body of data we found that conversational discourse is the best material for revealing how people use Chinese conjunctive adverbs in a real communicative setting. Our data are taken from near-conversational sources, namely from dialogue in Lao She's play, and Wang Shuo's novels. Lao She and Wang Shuo are both known as masters of Beijing dialect. The languages they use in their works is so close to the colloquial dialect that linguists use them as main sources in compilation of the *Dictionary of Beijing Dialect*. We believe that the data taken from their works are even better than the tape recordings of well-educated 'native speakers'.

48) A. Wo xiang chu qu gongzuo.

I want out go work

B. Keshi, jiali de shir ne? Laotaitai, haizimen...
but family MD matter PRT grandmom children

A. Na ye lan bu zhu wo chu qu gongzuo!
that YE stop NEG stop I out go work

C. Namu, ni jiu gancui gexia Laotaitai, haizimen
then you JIU simply put aside grandmom children
bu guan ma?
NEG care PRT

"A. I want to go out to work.

B. But what about things at home, Grandmom, your
children...

A. Even those things can not keep me from going to
work!

C. Then, you just put Grandmom and children aside and don't care?"

Lao She <Female Clerk> P. 456

In this mini-conversation, A is a young woman who has a hoard of kids and an old grandmother-in-law whom she takes care of. But now she wants to go out to work. Her neighbor B and her sister-in-law C both question her decision. When B first raises the question, A admits that there is a problem by using the demonstrative 'na' (that), which confirms the previous information. Then A uses *ye* to express a concessive conditional relation between the problem repeated by 'na' and her decision to go to work. After that, her sister-in-law expresses her outrage by asking a rhetorical question in which *jiu* is used. It is very interesting to note that both *jiu* and *ye* are used in association with demonstrative 'na', which represents the old (given) information and a particular form of sentence. *Ye* is used in a sentence that expresses a strong decisive confirmation, and *jiu* is used in a rhetorical sentence that expresses strong opposition. This type of association between adverb and sentence form indicates the specific discourse reason for the emergence of modal uses of Chinese adverbs.

Behind the careful choice of linguistic forms are the communication strategies determined by the conversational participants' social relations and social interests. A is a daughter-in-law in the family. She knows very well that if she wants to go out to work, her sister-in-law will strongly oppose her. In order to avoid the conflict with her sister-in-law, but at the same time get her message across, A started the

conversation by telling B, her neighbor, her wish to work outside of the family. As a neighbor, B has no direct interest in this matter, nor does she want to offend either A or C. She thus expresses her concern in a very soft tone by using the particle 'ne', which is crucial in indicating her position. The strong reaction from A is more directed at C than at B. By using a concessive conditional sentence, A made her decisiveness very clear to C. Driven by her direct interest, C has nothing to hide. She chooses a rhetorical question to fight back. The question tells A how angry C is and tells B at the same time how selfish A is.

49) A. Wo you shenmo hao de? you mei qian you mei benshi,
I have what good NOM YOU NEG money YOU NEG
ability

zhang de ye yiban. Ni gen wo li le zai
look DE YE average you with I divorce ASP ZAI
zhao ge hao de bu xin ma?
look for CL good NOM NEG okay PRT

B. Wo jiu kanshang ni le, laishang ni le, ni
I JIU aim at you ASP hang on you ASP ni
maobing zai duo wo ye bu xian, bie ren zai
shortcoming ZAI more I YE NEG mind other person ZAI
hao wo ye kan bu shang.
good I YE like NEG on

"A. What is good about me? I have no money, no
ability, and with average looks. Why don't you
divorce me and find a better husband?

- B. I am just attracted to you and have decided to hang on. No matter how many shortcomings you have, I do not mind. No matter how good others are, I am simply not attracted to them."

Wang Shuo <Die After Having Some Fun> p. 118

This conversation takes place between a couple whose marriage is in trouble. The husband, A, wants to divorce his wife. The wife does not want a divorce and does not take her husband's suggestion seriously, because the husband hardly takes anything in life seriously. The strategy taken by A is to describe himself as badly as possible. He used 'you...you' to list his two weaknesses and 'ye' to add one more. Entering the conversation with a clear attitude, B's strategy is not to take A seriously regardless of what he says. Thus she deliberately downplays the significance of A's weaknesses. Interestingly enough, she does not deny the existence of her husband's weaknesses by saying something like 'You are handsome' or 'you are very talented'. She just states that she doesn't mind. By doing so, she not only kills the divorce proposal but also indicates jokingly how much she has sacrificed and how much she loves him. B's strategy determines her choice of adverbs. Jiu expresses a stubborn attitude. This meaning is related in a specific discourse in which B tells her husband that her position opposes his even after he reveals so many negative characteristics of his. The concessive meaning of the construction 'zai...ye' further excludes any possibility of a divorce and consequently strengthens B's position.

50) A. Zuotian wanshang wo kanjian ni le, he yi ge nan
tomorrow evening I see you ASP with one CL male
de.

NOM

B. Zuotian wanshang wo jiu mei chu men.
tomorrow evening I JIU NEG exit door.

A. Juedui shi ni, wo zixi liaowang le yixia.
absolute SHI you I careful watch ASP a while

B. Shi bu shi wo wo hai bu zhidao? Ni kending
SHI NEG SHI I I HAI NEG know you definitely
rencuo ren le.
misidentified person ASP.

"A. Last night, I saw you. You were with a man.

B. I did not even walk out my door last night.

A. That definitely was you. I closely watched for a while.

B. Wouldn't I know if that were me? You definitely mistook
someone else for me."

Wang Shuo <The Story of Editor's Office> p. 57

This conversation is between two colleagues. B is a single woman, A is a bachelor. A likes B, but lacks the courage to tell her directly. His strategy toward her is to make up stories to test her and make sure she is not dating someone else. B does not know that A constantly tests her. When A tells her that he saw her with a man last night, B tells him quite seriously that she did not go out last night. She uses *jiu* to emphasize the absolute impossibility of being seen. But A wants to make sure she was not dating anyone, thus he insists that he carefully checked the

identity of the couple. His stubbornness surprises B, she feels awkward. Her attitude toward A changes a little bit. "Could I perhaps know better than you where I was?" Her rhetorical question has a clearly impatient tone. In such discourse, *hai* is used to specify a modal sense.

From the above analyses, we can see that when people participate in a conversation, depending on their social relations and interests, they will form different communicative strategies. These strategies determine the use of linguistic constructs. Used repeatedly within a specific discourse and in a specific grammatical sense, a linguistic construct will be grammaticalized (Hopper and Thompson, 1992).

In section 2.2 we described Chinese conjunctive adverbs at discourse level. Most previous studies on Chinese conjunctive adverbs are conducted solely at sentence level or start from sentence level and progress to discourse level. The order could be reversed. From a grammaticalization point of view, all grammatical meanings are created or at least triggered in discourse. They may be further grammaticalized into syntactic or morphological elements, but it is impossible to reverse the process. Consequently, this study has started its investigation at the discourse level, and now we are ready to move to the sentence level.

2.3 From Discourse to Syntax

The main functions of Chinese adverbs that we found in section 2.2 are to link clauses and express modality. There are some functions of Chinese adverbs mentioned in the literature review in 2.1 that we did not observe in 2.2, for example, as a

quantifier used before a noun phrase. We consider the limiting function of Chinese adverb to operate at the sentence level. Though there is no precise definition of a Chinese sentence (Chu, 1993), we will follow the traditional practice in linguistics, which considers a sentence a unit that expresses a 'complete meaning' and has a complete intonation (Bolinger, 1978).

As we have demonstrated in section 2.2, almost every Chinese conjunctive adverb indicates some sequence between events. But each of them is specialized in a specific discourse context. For instance, *jiu* indicates an immediate sequence between events, while *cai* indicates that one event will not happen until another event has occurred. This difference is further illustrated below:

- 51)a A. Zuotian fang xue hou, ni guang jie
yesterday release school after you wander street
le dui bu dui?

ASP right NEG right

- B. Wo fang xue hou jiu hui jia le.

I release School after JIU return home ASP

Nar dou mei qu.

nowhere DOU NEG GO

"A. Yesterday after school you went to wander in the streets, right?

B. I went home right after school. I went nowhere else."

- 51) b. A. Zuotian fang le xue ni jiu hui jia le
yesterday release ASP School you JIU go home ASP
dui bu dui?
right NEG right

B. Wo guang le yihuir jie cai hui jia de.

I wonder ASP a while street CAI go home NOM.

"A. Yesterday you went home right after school, right?

B. I did not go home until after wandering in the
street for a while."

It is exactly this kind of restrictive (or exclusive) sense that gives *jiu* and *cai* a somewhat 'limiting' function. And this limiting function can be further negotiated in a specific discourse context. Let us take *cai* as an example:

52)a. (Two friends were having dinner together. After
finishing HIS OWN meal, A asked B):

A. ni chi wan le meiyou?
you eat finish ASP NEG

B. Wo cai chi le yi bar.
I CAI eat ASP one half

"A. Have you finished (your meal) ?

B. (So far) I have just finished half of it."

52)b. (Then they SHARED one dish of Chinese dumplings. After
finishing the dish, A asked B):

A. Ni chi le ji ge?
you eat ASP how many CL

B. Wo chi le ba ge.
I eat ASP eight CL

A. Wo cai chi le si ge!
I CAI eat ASP four CL

"A. How many did you eat?

B. I ate eight.

A. I only ate four!"

In example 52)a, the events are in a temporally sequential relation. The function of *cai* is still quite closely related to its function in section 2.2 or in example 51)b, namely expressing sequence. The issue is related both to sequence and quantity. But in 52)b, the matter is purely about the quantity. *Cai* gains a clear sense of 'limiting' and modal meaning which shows A's strong complaining attitude. It is in such a discourse context that *cai*'s limiting sense and modal meaning gets generalized.

Once a grammatical meaning is generalized, it has more frequent and freer uses (Bybee, 1986; Bybee, Perkins and Pagliuca, 1994). *Cai* is no longer limited in a typical adverbial position between subject and verb. Now it can appear in a prenominal position to quantify the NP and indicate dissatisfaction. For instance:

53) *Cai sang ge ren lai kang wo de yanchu.*

CAI three CL person come see I POSS performance.

"Only three people showed up to see my performance."

Jiu underwent a similar process. At sentence level, it can appear more freely. Besides all the functions we have seen, *jiu* can appear in a prenominal position to quantify a NP and indicate a disapproval or disappointment. One example:

54) *Jiu ni yi ge ren mei kao shang.*

JIU you one CL person NEG exam pass

"Only you failed the exam."

Recall that in 2.2 we observed, that the modal use of conjunctive adverbs is often in a rhetorical question that contains a demonstrative. Once the modal sense is further

grammaticalized, conjunctive adverbs perform this function more freely also. For instance:

55) Ni bu ran wo qu, wo jiu yao qu.

you NEG allow me go I JIU want go

"You don't let me go, but I definitely will go."

56) Jiu ni neng bu gou, za le ba?

"You think you have only unlimited abilities. You made a fool of yourself, didn't you?"

But a question is the type of sentence in which conjunctive adverbs do perform their modal functions.

So far we have been focusing on two 'restrictive focus particles' (König, 1991b), namely *jiu* and *cai*. In fact, the 'additive' (exclusive) adverbs such as *ye*, *you*, *hai* and *zai* underwent the same generalization. We take *ye* as an example.

Recall that in example 46), *ye* indicates an adversative relation related to *ye*'s 'mild tone'. In that case, *ye* is in a typical adverbial position, namely before the stative verb '*zai*'. After its meaning becomes generalized, *ye* can be used before an NP to downplay the significance of a quantification. Certainly this sense is still related to an adversative relation.

57) Nimen rangrang le ban tian, wo yiwei shenmo dabuliao

you yell ASP half day I guess what big

de, ye buguo san kuai qian.

NOM YE but three CL money

"You have yelled at each other for hours. I thought it was a big issue. It turned out to be just for three yen!"

A sentence-initial position for *ye* clearly reveals the adversative relationship. For example:

58) *Ye jiu ni le, ge bie ren, wo zao sha le ta le.*

YE JIU you ASP to other person I early kill ASP him ASP

"It is just you (i.e. count yourself lucky), if anybody
else (did this), I would have killed him already."

The process from discourse to syntax hypothesized in this section will be made explicit in section 3.1.1.

2.4 Summary of 2.2 and 2.3

In the two sections 2.2 and 2.3, we have described Chinese conjunctive adverbs at discourse and sentence levels, respectively. Our purpose is not to exhaust all the grammatical meanings in detail, but rather to focus on the linguistic environment for each function and the process in which each function is negotiated and becomes grammaticalized in an instance of specific discourse. By linguistic environment, we mean discourse type (e.g. narrative, in which the diagrammatic iconicity is fully observed), communicative setting, speaker's strategy and sentence form (e.g. clause chaining and rhetorical question). In terms of functions performed by Chinese conjunctive adverbs, our findings are compatible with what Cheng (1993), Liu (1993), and Chu (Ms) have observed. But we obtained them in a quite different way, namely, by considering synchronic phenomena not as 'fixed and plane' structures, but rather as an on-going process. Therefore, the different uses are not unrelated, separate categories, but related in one way or another. We believe that the synchronic variations reflect the historical changes. In the next section, we will hypothesize some

grammaticalization paths for Chinese conjunctive adverbs based on their synchronic variation and 'semantic relatedness theory'. Then we will test these hypotheses by using historical evidence in the following chapter.

2.5 Semantic Relatedness and Grammaticalization Paths:

An Illustration with Conjunctive Adverbs

2.5.1 Semantic Relatedness in Cognitive Semantic Study

The study of semantic relatedness in cognitive semantics, it may be recalled from section 1.3.3, aims at a motivated account of recurrent patterns of polysemy and pragmatic ambiguities in language synchrony and semantic changes in language diachrony. Its underlying assumption is that synchronically related senses are also diachronically related, and that it is from synchronically derived senses that we can also reconstruct the direction of semantic changes. In this reconstruction, the cross-linguistically observable **polysemy patterns** is the most important evidence.

Based on his cross-linguistic (mainly European languages) investigation of adverbial subordinators, Kortmann (1994) establishes some 'networks of interclausal relations' and discusses the semantic relatedness between these networks and between the individual members within each network (Kortmann, 1994:140-212). The major networks of interclausal relations proposed by Kortmann are temporal, modal, CCC (causal, conditional and concessive in a wider sense) and 'other' relations which includes place, preference, concomitance, etc. The strongest semantic affinities (adjacent meanings) between different networks and the members within the same network are

established by a statistical analysis on a large set of languages with the parameters such as 'cognitive basicness for the concerns and life', which may relate to the simplicity/complexity in their linguistic encoding forms, and therefore the degrees of lexicalization of the individual interclausal relations. The more basic a relation is for concerns of life, the more extensively it is coded; the more basic a relation is, the simpler its linguistic encoding form is; the more basic a relation is, the higher degree of lexicalization (grammaticalization) its linguistic encoding form has. Obviously, these parameters are related to the theory of iconicity, which assumes a direct correlation between the formal simplicity/complexity of grammatical structures and the cognitive status of the concepts these structures denote, such that "the concepts which are always or frequently expressed by simple grammatical structures are cognitively primitive and those expressed by complex structures are cognitively complex" (Croft, 1990:173).

Working within these parameters, Kortmann found that temporal, modal and CCC relations are more basic than 'other' interclausal relations, namely they have simpler, highly lexicalized linguistic decoding forms compared with relations such as place and concomitance. One may intuitively react to this finding by asking, "Can relations such as CCC be even more primitive than relations of place and simultaneity?" To solve this seemingly obvious contradiction, Kortmann turns to the Principle of Informativeness proposed by Atlas and Levinson, according to which, "The 'best' interpretation of an utterance is the most informative one consistent with what is non-

controversial" (Levinson, 1987:66). Kortman claims that the Principle of Informativeness interprets cognitively specific relations; namely it is a hypothesis of conceptual relatedness within the semantic space of circumstantial relations, while iconicity is the principle to interpret cognitively general relations. He argues that "the process of identifying some logical roles for a given free adjunct/absolute is essentially determined by a scale on which the semantic relation ... can be arranged according to their specificness. ... Thus 'more informative' semantic relations will be distinguished from 'less informative' ones on the basis that the former require more knowledge or contextually substantiated evidence in order to be identified as semantic relation holding between the proposition denoted by a given free adjunct/absolute and some matrix proposition" (Kortmann, 1991:119f). For instance, the English word 'while' has different meanings in specific contexts: 'while' (Simultaneity Duration), 'whereas' (Contrast), 'although' (Concession) or 'since' (Temporal and Causal). The temporal readings are generally held to be less informative interclausal relations than the CCC relations. In this sense they are less 'primitive' (Kortmann, 1994:155-56). Kortmann's analysis reminds us of the distinction made by Thompson and Longacre between two types of clauses:

In other words, time, locative, and manner clauses state that the relationship between the time, place, or manner of the event in the main clause and that of the subordinate clause is the same. ... In contrast, the other adverbial clause types... do not express that two events have something in common, but that one event *modifies* the other, as in the reason or conditional clause sentences,...

(Thompson and Longacre, 1985:179)

The clauses that do not modify the main clauses certainly require less contextual evidence to identify their logical role; thus are 'less informative' and less 'primitive' in a cognitive sense. But one near-temporal sense--sequence-- certainly modifies the main clause; it should not be treated as a 'less informative' relation.

The predictions made by the Principle of Informativeness conspire with other synchronic, ontogenic, and phylogenetic facts observable across languages that also suggest an ordering of interclausal relations on a cognitive gradient. The works done by König have much in common with Kortmann's observation (cf. 1.2.3 König).

Armed with all these principles and based on his statistic analysis of a large set of cross-linguistic data, Kortmann proposes a 'macro-structure of the semantic space of interclausal relations':

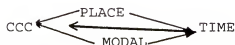


Figure 2.2 The macro-structure of the semantic space of interclausal relations

Kortmann elaborates on the figure by arguing that the highest degree of semantic affinities is found between the networks of temporal and CCC relations, whereas there are only weak affinities between the networks of locative and temporal relations, temporal and modal relations, modal and CCC relations, as well as CCC and locative relations. Semantic affinities are virtually absent between locative and modal relations. He also proposes a unidirectional relation between these interclausal

relations and claims that such a directedness is especially reflected in the most frequently observable semantic change across languages. He suggests "that temporal relations generally give rise to CCC relations (but not vice versa), that both locative and modal relations feed into the TIME network and partly via the latter, to the CCC network (but not vice versa). It is crucial to stress that none of these links holds the reverse, i.e. neither are CCC subordinators found to develop into temporal, locative or modal readings, nor do temporal subordinators come to serve as locative or modal markers" (Kortmann, 1994:181). But this unidirection does not necessarily hold between members within the same network.

Now let's look at the 'semantic affinities map' proposed by Kortmann for each network and the network-transcending affinities between networks⁴:

A. The temporal relations:



Figure 2.3 A cognitive map of the most important network-internal affinities among temporal relations

(Kortmann, 1994:189)

as we mentioned earlier, Kortmann claims that the semantic change within a network of interclausal relations is not necessarily unidirectional; thus Figure 2.3 tells us only the existence of semantic affinities between different relations and degree of the closeness between different relations. For instance, the indefinite time contingency (CONTIN) is relevant only in connection with simultaneity overlap (SIOVER);

anteriority (ANTE) has a loose connection with Terminus a quo, whereas immediate anteriority has no such relation, even though two anteriority relations are closely linked.

B. Network-transcending affinities of temporal relations:

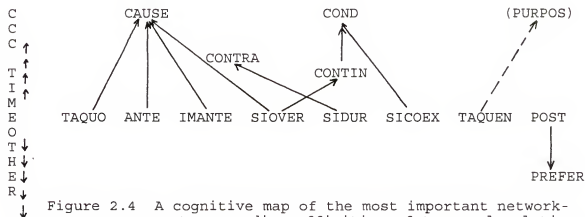


Figure 2.4 A cognitive map of the most important network-transcending affinities of temporal relations

(Kortmann, 1994:196)

Figure 2.4 shows that there is a direct link between cause and terminus a quo, anteriority relations. The relation of contrast is only directly linked to one temporal relation, i.e. simultaneity duration. The temporal relation simultaneity co-extensiveness, is linked to conditional relation directly, while the affinity between condition and simultaneity has to be through contingency. We find that these affinities are applicable to Chinese conjunctive adverbs too. For example, only the Chinese adverb *hai*, which can express simultaneity duration, has acquired the function of indicating contrast relation; another temporal adverb *ye*, which expresses simultaneity overlap does not have the function. This point is illustrated below:

- 59) a. Hao ba, wo chu qu liuliu, zheli chu bu lai qi.
 okey I out go walk here out NEG come AIR

B. Ni chu bu lai qi, wo hai bie de huang
 you out NEG come air I HAI suffocate DE unbearably
 ne!
 PRT

"A. Okay, I will go out to walk for a while. I can not
 breathe here."

B. You can not breathe, I am suffocating badly!"

Lao She <Tea House> p 400

This dialogue takes place between the owner of a tea house, B,
 and a customer, A. A does not want to pay for his tea and feigns
 difficulty in breathing. B is very angry and uses *hai* to express
 his strong contrastive mood. If we substitute *hai* by *ye*, the
 sentence will be:

B. Ni chu bu lai qi, wo ye bie de huang ne.
 you out NEG come air I YE suffocate DE very PRT
 "You cannot breathe, I am suffocating also."

Clearly, the contrastive sense disappears. What we get is
 'Similarity' rather than 'Contrast.'

C. The locative relations:

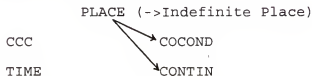


Figure 2.5 A cognitive map of the most important
 (network- external) affinities of PLACE

Since the Chinese adverbs with which this study is concerned do
 not have locative functions, we will not expand on it any more.

D. The modal relations:

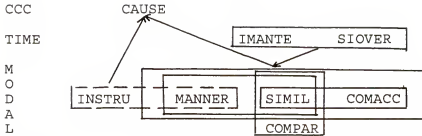


Figure 2.6 A cognitive map of the most important network-internal and network-transcending affinities of modal relations

Figure 2.6 shows that almost every modal relation has a direct link to Cause except Comparison. It also indicates that both Immediate Anteriority and Simultaneity Overlap can give rise to modal relations such as Manner and Similarity. If we recall the functions of *jiu* and *ye* we described in 2.2 and 2.3, we will find the same affinities exist in Chinese.

E. The CCC relations:

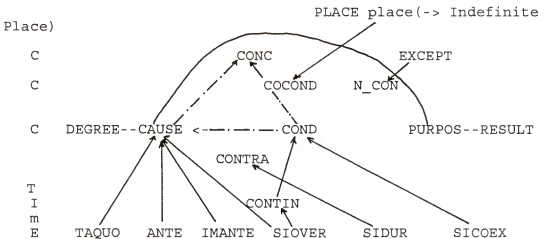


Figure 2.7 A cognitive map of the most important network-internal and network-transcending affinities of CCC relations (Kortmann, 1994:209)

Besides what we have seen in the previous figures, Figure 2.7 shows that the condition relation can indirectly give rise to both cause and concessive conditional relations; the concessive

condition can directly give rise to concession; cause can indirectly give rise to concession; and there is a direct link between cause and purpose, but the direction is not clear.

Based on our observations in 2.2, 2.3, and Kortmann's semantic relatedness 'maps', and König's observation (König, 1991b), we will hypothesize some grammaticalization paths for Chinese conjunctive adverbs in the next section. There is, however, a difference between what Kortmann proposes and what König hypothesizes. König considers modal use the final stage of grammaticalization for focus particles (König, 1991b), but Kortmann claims that there is a unidirectional directedness from modal to CCC, not vice versa. We feel that some modal uses (mainly epistemic uses) are more 'subjective' or 'expressive' (Traugott, 1987) than CCC markers, which have less truth-conditional values, whereas others (mainly deontic uses) are less truth-conditional than CCC markers (e.g. instrument and similarity). Therefore we will not follow Kortmann to assume a single unidirectional relation between modals and their CCC uses in general. We will rather assume two separate unidirectional relations. One is from deontic modals to CCC markers, the other is from CCC markers to epistemic modal uses. Basically our position is more like König's, which considers modal uses as the final stage of grammaticalization for focus particles, especially the modal senses that express the attitude of a speaker⁵.

2.5.2 The Grammaticalization Paths of Chinese

Conjunctive Adverbs:

The grammaticalization path is similar to grammaticalization chains, but chains differ from paths in that a chain consists of

overlapping links instead of linear stages. Our choice of using the grammaticalization path over grammaticalization chains is purely due to its convenience.

We want to emphasize here that the grammaticalization paths proposed in this section are based only on the synchronic observation of Chinese conjunctive adverbs. They have to be tested against historical investigation, which we will conduct in the next chapter.

A. The grammaticalization path of *jiu*:

motion verb --> time (immediate anteriority/restrictive focus) --> sequence --> condition/cause --> concessive condition --> limiting (restrictive focus in prenominal position) --> attitude

B. The grammaticalization path of *ye*:

time (simultaneity overlap) --> similarity (additive focus) --> condition --> concessive condition --> attitude

C. The grammaticalization path of *zhi*:

restrictive focus --> adversative

D. The grammaticalization path of *cai*:

time (anteriority/restrictive focus) --> sequence --> condition --> cause --> limiting (restrictive in prenominal position) --> attitude

E. The grammaticalization path of *zai*:

repetition of action (additive focus) --> time (anteriority) --> condition --> concessive condition --> attitude

F. The grammaticalization path of *hai*:

motion verb --> time (simultaneity duration/additive focus) --> contrast/concession

G. The grammaticalization path of you:

temporal sequence --> accumulation (additive focus) -->
attitude

Notes

¹This means that the clauses conjoined by *ye* actually have something different and something in common. Lu elaborates that the feeling of similarity builds on the similar part. If the predicates in conjoined clauses are alike, the feeling of the similarity is strong. If, instead, only the subjects are alike, the feeling is weak. *ye* is used in the latter case.

²Though *hai* is pronounced as both [hai] and [huan] in present Mandarin, its two different functions have the same pronunciation in some conservative dialects, such as Cantonese. Based on this observation, a number of scholars believe that the adverbial [hai] is derived from verbal [huan] through grammaticalization, and during the process [huan] underwent phonological reduction, namely lost its final consonant. (cf. Yeh, 1995)

³This tape recording was made in summer 1994. The student was born and raised in Beijing.

⁴Before we discuss the relationship between individual relations within the same network and the network-transcending affinities in detail, some abbreviations that Kortmann uses need explanation:

The distribution of the 32 'project relations across the four major networks of interclausal relations are:

ADDI Addition 'in addition to' -
ANTE Anteriority 'after' TIME
CAUSE Cause/Reason 'because' CCC
COCOND Concessive Condition 'even if' CCC
COMACC Comment/Accord 'as' MODAL
COMPAR Comparison 'as if' MODAL
CONC Concession 'although' CCC
COND Condition 'if' CCC
CONTIN Contingency 'whenever' TIME
CONTRA Contrast 'whereas' CCC
DEGREE Degree/Extent 'insofar as' CCC
EXCEPT Exception/Restriction 'except that' CCC
IMANTE Immediate Anteriority 'as soon as' TIME
INSTRU Instrument/Means 'by' MODAL
MANNER Manner 'as, how' MODAL
N_COM Negative Concomitance 'without' -
N_COND Negative Condition 'unless' CCC
N_PURP Negative Purpose 'lest' CCC
PLACE 'where' PLACE
POST Posteriority 'before' TIME
PREFER Preference 'rather than' -

PROPOR Proportion 'the...the' MODAL
 PURPOS Purpose 'in order to' CCC
 RESULT Result 'so that' CCC
 SICOEX Simultaneity Co-Extensiveness 'as long as' TIME
 SIDUR Simultaneity Duration 'while' TIME
 SIMIL Similarity 'as like' MODAL
 SIOVER Simultaneity Overlap TIME
 SUBSTI Substitution 'instead of' -
 TAQUEN Terminus ad quem 'until' TIME
 TAQUO Terminus a quo 'since' TIME
 (Kortmann, 1994:182)

⁵. One possible reason for the difference between König and Kortmann is that Kortmann has a very large category of modal relations which even include 'instrument', while König uses 'modal value' in a narrower sense, namely in epistemic sense only.

CHAPTER 3
GRAMMATICALIZATION OF THE DISCOURSE FUNCTIONS OF CHINESE
ADVERBS: A DIACHRONIC PERSPECTIVE

In this chapter we describe the grammaticalization of Chinese conjunctive adverbs in a diachronic perspective. The purpose is to seek historical evidence and explanations for the grammaticalization paths we proposed in Chapter Two. The emphasis is not on exhausting all the uses that Chinese conjunctive adverbs have performed, but on the internal relations between the different uses for the same adverb as well as on the external relations between different adverbs. Consequently, the methodology does not proceed by perusing Chinese history in stages with regard to significant changes the language has undergone and then examining representative adverbs from each stage. It is rather to arrange the instances of historical evidence along the paths of grammaticalization for each individual conjunctive adverb's grammaticalization, as the stages in the development of the language as a whole may not necessarily coincide with those of the adverbs.

3.1 Previous Studies with Diachronic Concern

There are many studies on function words in classical Chinese, but most of them are synchronic studies that treat classical Chinese as basically a fixed, unchanged system from pre-Qin dynasty (4th century BC) to late-Qing dynasty (early 20th century AD). Historical, developmental studies are rare and these few are not conducted in any consistent

theoretical framework.

3.1.1 Yang (1979)

Yang (1979) is quite an authoritative work on function words in classical Chinese. In fact, his work represents a scholarly family's continuous efforts in that particular field¹. It lists different uses of function words in classic Chinese and illustrates them by examples.

Cai, for example, is identified by Yang as an adverb with two meanings, one is 'only/just', the other is 'slightly'. With the sense of 'only/just', cai may be used with a temporal, quantitative, or stative phrase. The second use, glossed as 'slightly', actually represents the use of cai as a linking element in the sense of 'only...then', as can be seen in the example Yang gives:

- 1) Chi-Mei shi wan ren gong Yi qian-
 Red-Eyebrow cause ten-thousand people attack NAME front-
 bu, Yi cai chu bing yi jiu zhi.
 wing NAME CAI send troops to rescue PRO
 "Only because/when the rebel Red-Eyebrows attacked Yi's
 front ranks with ten thousand soldiers, did Yi send troops
 to rescue them."

Yang (1979:308)

A very interesting point made by Yang is that he considers four different characters, 纔, '才', 裁, 財, with the same pronunciation 'alternative forms' for the lexeme 'cai'. This is closely related to our discussion on analogy later in this chapter.

As for *jiu*, Yang identifies it only as a concessive connective. In fact, the concessive usage of *jiu* in classical Chinese is not an adverbial use. First, it does not appear in a nucleus clause, as all Chinese adverbs do; second, it can be used in the sentence-initial position like a conjunction. We will argue that *jiu* acquired this function from '*ji*' by analogy, rather than along its grammaticalization path as an adverb.

Since the aim of Yang's study is to offer only a synchronic description of classical Chinese, none of his examples are dated. This shortcoming is very inconvenient for anyone who has an interest in the historical study of the language.

3.1.2 Ota (1958/1985)

Ota (1958/1985) is a reference grammar based on texts from all stages of Chinese. It provides a detailed account of Chinese grammar from a historical, developmental perspective. Ota makes two strong points: First, deviating from the traditional practice of ignoring colloquial materials Chinese grammar, Ota uses a large number of texts in colloquial Chinese, such as the bianwen² (short narratives) of the Tang dynasty (A.D. 618-907), and xiaoshuo³ (novels) of the Ming and Qing dynasties (14th through early 20th centuries). Second, he pays close attention to the relations between different function words. Though Ota does not provide explanations for the historical phenomena, his detailed description is very useful for work in the grammaticalization framework.

As the book is organized according to syntactic categories, the different uses of the conjunctive adverbs we are concerned with are dispersed throughout the book.

Jiu may have three uses: a) as a 'pseudo-connector' (zhunlianci); b) as a subordinating conjunction introducing a concessive conditional or simple conditional; c) as a 'pseudo-sentence-final particle'.

Ota takes jiu as a 'pseudo-connector' for the reason that jiu is normally not a conjunction; that is, its position in a sentence is typical for an adverb--between the subject and the verb--but it correlates with a preceding connector in a two-part conjunction. It thus acquires the potential of a linking effect, as shown in the example below:

- 2) Ni jiran you-bing, jiu bu bi shang-xue le.
 you since have-sickness JIU NEG need go-to-school ASP
 "Since you are sick, you don't need to go to school."

(Ota, 1985:292)

Here, jiu is correlated with the conjunction 'jiran' 'since'. Without specifying the time for the first appearance of this connecting use, Ota further states that even in the absence of another connector, jiu itself may also convey a sense of sequentiality or conditionality.

For instance:

- 3) Qing shuo de shi; jiu jia qing wei Xuanze-
 minister say DE true JIU appoint minister be select
 shi.
 official
 "What you, the minister, said is very true, so you, the
 minister, are appointed to be the official of selection."

<Han Gong Qiu (Ma Zhiyuan 1260-1325)>

The uses above illustrate what we have called conjunctive function of the adverbs.

According to Ota, the occurrence of *jiu* as a subordinator to lead a concessive conditional starts to appear sometime after the East-Han period (A.D. 25-220). For example:

4) *Jiu* you suo yi, dang qiu qi bian-an.

JIU have NOM doubt should pursue PRO safety.

"Even if he had doubts, he ought to have settled the matter with caution for safety's sake."

<Hou-Han Shu comp., Fan Ye, A.D. 398-447>

Again, this usage is not completely an adverbial use, but a conjunctive one as well.

Jiu's use as a 'pseudo-sentence-final particle' serves to 'limit' (Ota, 1985:362). The beginning of this limiting use is said to be sometime after the Yuan dynasty (A.D. 1271-1368).

Cai may have three uses also: a) As an adverb, *cai* is commonly used to mean 'only/just', 'not until...then' which marks a sufficient conditional; b) as a connector in a correlated conjunction, *cai* usually co-occurs with the conjunction '*zhiyou*' 'only if' which indicates sufficient conditional also; c) as a pseudo-sentence particle, *cai* is used for emphasis. It is usually combined with the copular *shi* or the adjective *hao* 'good' to make an emphatic comment. The time this emphatic use started around Yuan dynasty (A.D. 1280-1368).

Ota suggests that the original meaning of *hai* is 'return' or 'circulate'. From this original meaning, other meanings are later derived, such as 'opposite' and 'again'. But before the Tang dynasty (618-907 A.D.) *hai* mainly indicated the repetition of an

event/state, whereas in present Chinese it means continuation of an event/state. When *hai* is combined with *shi*, however, it has been used to express the continuation of an event/state since as early as the Tang dynasty. For instance:

5) Wang lang *haishi* bu hui jia.

NAME Mr HAISHI NEG return home

"Mr. Wang has still not come home yet."

<Guqiongci, before 960 A.D.>

The use of *hai* for continuation is sometimes correlated with two sentence-final particles, namely *lei* and *ne*. For instance:

6) Ta shuodao: *hai* zao lei.

he say HAI early PRT

"He said that it is still too early."

<Chengzhoutimi, 1271-1368 A.D.>

7) Women *hai* you shir ne.

we HAI have thing NE

"We still have business to take care of."

<Honglouloumeng, 1st published edition 1792>

Ota suggests that *hai* can be used in a comparative sentence to focus on the object that is compared with the topic of the sentence. For example:

8) Wo zhei zhi bi bi daozi *hai* kuai lei.

my this CL pen than knife HAI sharp PRT

"This writing brush of mine is even sharper than a knife."

<Jing-anzhou, 1271-1368 A.D.>

It is difficult to agree with Ota's description in this case. In fact, the use of *hai* in sentence 8) is quite similar to

the English scalar particle 'even'. Its focus is on the degree of the result of comparison, rather than on the object itself.

According to Ota, you can be used as both an adverb and a conjunction. As an adverb, it expresses 'repetition'; as a conjunction, it expresses 'co-existence' or 'accumulation'. For instance:

9) you you quanshi you you qianchao.

YOU have power YOU have money

"(He) has both power and money."

<Chengzhoutimi (1271-1368 A.D.)>

Ota emphasizes that when expressing co-existence you has a 'strong emphatic mood' (Ota, 1987:284). When you is used with another word 'ji' as a correlated conjunction, this emphatic mood is so strong that Ota considers the use an expression of 'accumulation' (296). For instance:

10) Ji you liquan, you chi min bing, jiang he ju yan?

JI have power YOU hold people control will what fear PRT

"(The person) not only has a crucial post, but also controls a lot of people; what will he fear for?"

<Zuozhuan (480-256 B.C.)>

Ota notes that the source meaning of ye is not clear. But he points out that ye has a lot in common with 'yi' and should belong to the same group. This point is very important for explaining how and where ye acquired adverbial function. We will discuss the process in detail later.

Ye can be mainly used in three ways: as an adverb, as a conjunction, and as a particle. As an adverb, ye expresses 'scope of inclusion' (tongkuo fanwei) (Ota, 1987:268), as in:

11) xing shu ye ying zai.

new tree YE should plant

"New trees should be planted also."

<Wangji (710-790 A.D.)>

Ota notes that this usage of *ye* was not seen frequently before the Tang dynasty (705-907 A.D.). We find that in all the examples given by Ota, *ye* has a clear scalar sense. As a matter of fact, example 11) should be interpreted as "Even new trees should be planted."

As a conjunction, *ye* expresses co-existence, but unlike you, *ye* has no emphatic mood. For example:

12) *chi de ye you, chuan de ye you, su chu ye you.*

eat NOM YE have wear NOM YE have stay place YE have

"(We) have food, clothes, as well as a place to stay."

<Huangliangmeng (1260-1325 A.D.)>

As a sentence-final particle, Ota suggests, *ye* expresses similarity, emphatic mood, and a rhetorical questioning tone. These uses are illustrated below respectively:

Similarity: *Bi zhangfu ye, wo zhangfu ye.*

he big-man YE I big-man YE

"He is a big man; I am a big man also."

<Mencius (470-391 B.C.)>

Emphatic mood: *Wude bu haisha wo ye!*

why NEG kill me YE

"Why don't you kill me!"

<Xiaoxiangyu (1280-1368 A.D.)>

Rhetorical question: *Ren ta zuo furen ke bu hao ye?*

take she as wife KE NEG good YE

"Is it good to take her as your wife?"

A close examination of the examples above reveals that the functions attributed to *ye* by Ota, in fact, are not carried out solely by *ye*. At best, *ye* only collaborates with other linguistic elements, mainly special types of sentence or particular function words, to perform the functions. For instance, the semantic similarity between two clauses in the first sentence is recognized partially by the same clause structure; the emphatic and rhetorical question tones in second and third sentences, on the other hand, are mainly expressed by the function words *wude* 'why' and *ke* respectively. The sentences would have the same tones even without *ye*. But it is important to note that *ye* is associated with such linguistic environments. It may well be the case that *ye* acquired some of its adverbial meanings through the conventionalization of its role in such linguistic environments.

Ota points out that in classical Chinese *zhi* is a particle which has no concrete meaning. The adverb *zhi* in modern Chinese is very likely a rewrite of the classic word '止' which has the same pronunciation as *zhi*. The limiting function of *zhi* was not seen until the period of the Southern and Northern dynasties (420-589 A.D.). For instance:

13) *Zhi ke zi yiyu, bu kan chiji jun.*

only can self entertain NEG bear send you.

"(My writing) is only to entertain myself. It is not good enough to show you."

<Tao Hongjing (546-536 A.D.)>

When *zhi* combines with *shi*, it functions as a conjunction that indicates an adversative relation. For example:

- 14) Xiyang wuxian hao, zhishi jin huanghun.
 setting sun incomparable good ZHISHI close dusk
 "The setting sun is incomparably beautiful, but it is
 close to dusk."

<Li Shangyin (813?-858 A.D.)>

Ota does not give the earliest date of the usage, but all of his examples are taken from Tang literature (618-907 A.D.). We can therefore assume that the beginning of *zhishi* in this sense was about that time at the latest.

Ota notes that in classical Chinese, *zai* expresses a specific quantity of action (*dongliang*) (Ota, 1987:154), which means 'two times'. For instance:

- 15) Ji Wenzi san si er hou xing. Zi wen zi
 NAME three think CONJ later act Confucius hear PRO
 ye: "zai si ke yi."
 say ZAI SI okay PRT

"Ji Wenzi always thinks three times before he takes action.
 When Confucius heard the story, he said: 'Two times will
 be all right'."

But in present-day Chinese, *zai* expresses 'repetition'. Ota claims that the present use of *zai* didn't appear until the 7th century.

An obvious weakness in Ota's study is that his terminology is not commonly shared by Chinese linguists and may therefore cause confusion. For instance, when Ota suggests that *zhi* is a 'rewrite' of the classic word '止', he actually deals with analogy.

3.1.3 Mei (1984)

In an attempt to use linguistic data to determine the chronology of some well-known Yuan plays (1280-1368 A.D.), Mei takes the frequent ratio between *jiu* and a synonymous adverb *bian* in the uses of temporal and sequential marking as one of his criteria. It is generally accepted that toward the end of Late Middle Chinese (around 12th century, A.D.), *jiu* started to replace the adverb *bian* and takes on its temporal adverbial functions. According to Mei (1984:126), at the end of the Song dynasty (around 1200 A.D.), the distribution of the two adverbs are as follows:

	Concessive	Loc Prep	Adverbial
<i>JIU</i>	+	+	-
<i>BIAN</i>	+	-	+

Figure 3.1 The distribution of *jiu* and *bian* in Late Middle Chinese over the three uses: concessive conditional, locative preposition, and adverbial temporal/linking function.

As Figure 3.1 shows, in Middle Chinese both *jiu* and *bian* may mark a concessive conditional, but only *bian* is used as a temporal/linking adverb. Mei further claims that the adverbial use of *jiu* only started to appear later, around the period of the Yuan dynasty (1271-1368). Therefore, Mei assumes that the more frequently *jiu* is used, the later the text might be. By comparing the ratios between *jiu* and *bian* in texts credibly dated and those in texts with an undetermined date, he makes the following generalizations:

a) If *bian:jiu* is greater than 6:1 (e.g., 5:1 or 4:1), the text must be written after 1300 A.D.

b) If *bian:jiu* is greater than 1:1.5, then the text must be written after 1400 A.D..

3.1.4 Cao (1987)

Cao (1987) questions Mei's conclusions and believes that the frequency of *jiu* (in relation to *bian*) might vary greatly from text to text in the same period. Therefore, the ratios do not provide a reliable clue for text dates. He observes that in *Yijian zhi*, a text written around 1200 A.D., *jiu* had already shown some adverbial senses that eventually became prevalent in modern Chinese.

In addition to the above observations, Cao further discusses the grammatical changes *jiu* has undergone from a verbal element, meaning 'move towards', to an adverbial element. He distinguishes two types of occurrences of *jiu* immediately followed by another verb during the Middle Chinese period. In the following sentence, *jiu* is still identified by Cao as a verb:

16) Shi ye, ji feng jie you huoguang, jiu shi ze
that night spear top all have flame JIU look then
wang.

disappear

"That night, there were flames sparkling on top of all
the spears. (He) went to take a look, and they all
disappeared."

<Soushen ji (265-420 A.D.)>

According to Cao, *jiu* in the above sentence designates a directional movement and is considered a prerequisite for the

following action to take place. The omitted object of *jiu* is also the object or the site of the following verb.

However, in the same period of Middle Chinese, other occurrences of *jiu* immediately followed by another verb are considered to be representative of the transitional stage from a verbal *jiu* to an adverbial *jiu*. For example:

- 17) Jian-an zhong, Hejian Taishou Liuzhao furen zu yu fu,
 ERA mid PLACE governor NAME wife die at home
 hou Taishou zhi, mengjian yi hao furen, jiu
 later Governor arrive dream one good woman JIU
 wei jiashi
 make wife

"In mid Jian-an, the wife of the Hejian Governor died at home. Later when the Governor returned, he dreamed of a fair lady and then took her to be his wife."

<Gu Xiaoshuo Gouchen (300-600 A.D.)>

Cao takes *jiu* in 17) as marking a resultative state, and the clause preceding *jiu* conveys the condition or situation that is conducive to the resultative state. Although Cao contends that the use of *jiu* in 17) is similar to the full-fledged linking use of *jiu*, it should still be viewed as an extended verbal use. The reason is that transitional examples like 17) rarely occurred in texts of Middle Chinese, and that the kinds of verbs following *jiu* are very limited.

Besides his discussion of the rise of the linking use of *jiu*, Cao mentions that the preverbal use of *jiu* also provides the grammaticalization basis for the limiting use of *jiu* (meaning 'only'). But he does not give any further explanation.

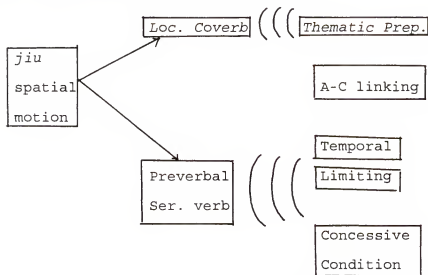
3.1.5 Liu (1993)

Liu (1993) divides the development of *jiu* into two major stages with regard to its grammatical role in a clause. She claims that in the period roughly before Early Middle Chinese (3rd-6th century A.D.), *jiu* occurred more frequently as a verb in a clause. When functioning as a verb, *jiu* extends from a prototypical motion verb with an agentive actor and a locative goal, to a non-spatial, goal-oriented predicate, then to a non-volitional predicate of some adversity, and finally to a non-active, stative predicate with the goal being the subject. These verbal uses of *jiu* vary in terms of degree of transitivity (Hopper and Thompson, 1980). From signaling a spatial motion to a non-spatial, stative predicate, *jiu* is scaled down on all the following parameters:

- a. number of participants
- b. kinesis
- c. volitionality
- d. agency
- e. individuation of participants

The second stage involves the categorical extension of *jiu* from a verb predicate to other syntactic categories. In this respect, *jiu* extends from a main verb to a serial verb, then to a variety of non-verbal uses: a locative or thematic coverb/preposition, a concessive conditional marker, a temporal marker, a sequential-linking element, and a scope-limiting element. Liu observes that the extension of *jiu* across these various categories points to the existence of metaphorical mapping from the spatial domain to other cognitive domains.

Based on the above observation, Liu proposed a 'polygrammaticalization chain' for *jiu*:



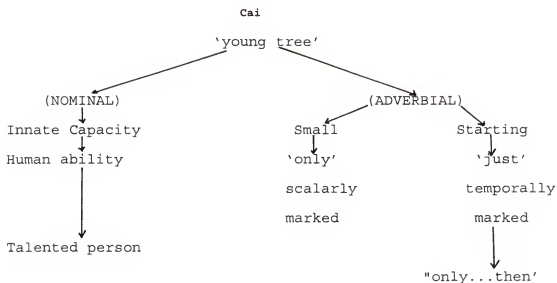
(1993:218)

Figure 3.2 The polygrammaticalization chain of *jiu*

As Figure 3.2 suggests, *jiu* has undergone grammaticalization along two channels. One is from *jiu* + NP + VP to preposition, the other is from serial-verb construction to adverb. Though the figure is basically correct, it does not tell us much about the relation between different adverbial uses. Are they all derived directly from serial-verb construction? or is there an order among them?

As for *cai*, Liu claims that in the early stages of Chinese, the use of *cai* already falls into two categories: nominal vs. adverbial. As a nominal element, *cai* means 'ability' or 'capable person'; as an adverbial element, *cai* marks the beginning of an event/action. Liu wonders that 'although both coded by *cai*, the two uses do not seem to be related in any clear way' (1993:234). But she resolves this puzzle by citing Shuo Wen, which is the

first etymological dictionary of Chinese.⁴ According to Shuo Wen, the original meaning of *cai* is 'the beginning/sprouting stage of a tree/plant'. Therefore, Liu assumes, there are two major components of this source meaning: 'tree' and 'the beginning stage'. She further hypothesizes that it is from these two components that *cai* developed the meanings 'ability' and 'beginning stage', respectively. Then she proposes a 'conceptual and grammatical expansion for the use of *cai*':



(1993:245)

Figure 3.3 Conceptual and Grammatical Expansion in the Use of *Cai*:

3.1.6 Summary of Diachronic Studies Reviewed

Most studies reviewed in this section (except Liu, 1993) are concerned with the synchronic usages of Chinese conjunctive adverbs in various stages of the language. They rarely discuss the mechanisms involved in the historical changes of Chinese conjunctive adverbs. Sometimes they touch on the question as to WHEN a certain use occurred for the first time (Mei, 1984; Cao

1987), but their interests are not in linguistic change itself, rather in using linguistic evidence to determine the date of certain texts (Mei, 1984; Cao, 1987). They never answer such questions as WHY and HOW some content words acquired their adverbial uses.

Liu seems to be the only person who attempts to discuss both the motivations and mechanisms involved in the process of the grammaticalization of *jiu* and *cai*. Her diachronic investigation is guided by a consistent theoretic framework, and some of her findings are quite convincing. But there are some problems in her study that need to be discussed. First, it seems that Liu does not distinguish the conjunctive use of *jiu* in a satellite clause from the adverbial conjunctive use in a nucleus clause. Her evidence for the concessive conditional use of *jiu* is, in fact, a conjunctive use rather than an adverbial use. Consequently, Liu dodges the question of how *jiu* acquired the concessive conditional function even before it gained the temporal use. This question, as a matter of fact, is crucial for explaining a number of issues in the grammaticalization of Chinese conjunctive adverbs, because it is related to the interactions between grammaticalization and analogy, and between old and new grammatical forms. Secondly, Liu's explanation of the grammaticalization of *cai* is not quite convincing. Her argument is almost entirely based on the source meaning provided by *Shuo Wen* and 'semantic reasoning', rather than historical evidence. Though *Shuo Wen* does offer an early meaning for *cai* on which Liu establishes her argument, it is well known that when *Shuo Wen* was written during the Eastern Han dynasty the earliest documented

material of Chinese, namely oracle inscriptions (16th-11th century B.C.), was not available to its author, Xu Shen (A.D. 70-130). The earliest material Xu Shen used was Zhou Wen. Zhou Wen was the writing system during the period of the Zhanguo (480-256 B.C.), and therefore the meaning given by *Shuo Wen* might not be the 'source meaning' but a meaning developed from the Warring States to Eastern Han period (480 B.C.- 220 A.D.). More importantly, *cai*'s adverbial use can be already seen in oracle inscriptions, whereas the meaning of 'beginning' was not visible at the time. We would argue that *cai* acquired its adverbial use from analogy rather than its source meaning, if there be any, through grammaticalization. The details will be given in the next chapter.

3.2 The Source Meanings of Chinese Conjunctive Adverbs

In the framework of grammaticalization, 'source meaning' is a very important notion. On one hand, it determines which lexical items are likely to be recruited to undergo grammaticalization. On the other hand, it determines the specific path of grammaticalization for a lexical item. It is said that only those lexical items which express the very basic concepts and propositional relations of human experience are most likely to be recruited to undergo grammaticalization (Heine, Claudi and Hünemeyer, 1991). The lexical items which have the similar source meanings will have similar grammaticalization paths cross-linguistically. Moreover, their source meanings will persist throughout the process of grammaticalization and influence their structural distributions as grammatical elements (Hopper and Traugott, 1993; Bybee, Perkins and Pagliuca, 1994). All the

Chinese conjunctive adverbs with which this study is concerned have the typical source meanings for undergoing grammaticalization. They are discussed here in two groups. One group includes those adverbs whose source meanings were verbs that express basic propositional relations of human experience; the other group includes those adverbs whose source meanings were nouns basic to human experience.

3.2.1 Jiu, Hai, Cai [zai] and Zai-Verbs That Express Basic Propositional Relations of Human Experience

Jiu and *Hai*: Motion proposition.

Neither *jiu* or *hai* is found in oracle inscription. The earliest appearances of the two words are in *Shi Jing* (Book of Odes, 770-485 B.C). At that time *jiu* meant 'to approach' and *hai* [huan] meant 'to return (to a place from another place)'. Their uses are illustrated by the following:

18) Hunyin zhi gu, yan jiu er ju.

marriage POSS reason PRT JIU you reside.

"Because of our affinity by marriage, I came to reside with you."

<*Shi Jing*: Xiaoya (600 B.C.)>

19) Er huan er ru, wo xin yi ye; huan er
you return CONJ enter I heart amiable PRT return CONJ
bu ru, fou nan zhi ye.

NEG enter PRT difficult know PRT

"(If) you come back and walk into my room, I will feel intimate with you; (if) you come back, but don't walk into

my room, then it will be difficult to know your feelings
(for me)."

<Shi Jing: Xiaoya>

Motion verbs are very likely to give rise to grammatical elements that are related to TIME, such as tense or temporal sequence, through the metaphor 'time is the motion of space'.

Cai [zai]: Locative verb/proposition.

The case of cai [zai] is quite complex. In oracle inscriptions, there is a character '才' which many scholars believe is the original form of zai '在' (Dobson, 1974:709) and which in present Chinese is the locative verb or preposition. But at the same time this character did have a function which is exactly what cai expresses in present Chinese. Though scholars are not sure about whether this character in oracle inscription was the old form of cai, they strongly believe that they must be somehow related (Zhao, 1988:302-03). These two different uses of the same character are illustrated below:

20) Kuihai bu, zai Xian zhen.

TIME divine ZAI PLACE divine

"At the time of Kuihai, (he) divined at Xian".

21) Jiazi bu, Wan zhen, Bi jiu cai ji, bu

TIME divine NAME divine NAME alcohol CAI sick NEG

cong wang gu.

follow king work

"At the time of Jiazi, Wan divined that because Bi will drink too much and get sick, he won't be able to follow the king to work."

<Oracle Inscription (18th to 12th Century B.C.)>

In sentence 21), *cai* expresses 'cause' which is one of the functions of *cai* in present Chinese as well, as we demonstrated in chapter 2.

According to Kortmann (1994), a locative element is likely to give rise to the grammatical marker of concessive condition, but highly unlikely to give rise to causal relation. Therefore, we suspect that *cai*'s function of expressing causal relation is a result of analogy rather than its grammaticalization.

Zai: Equational proposition.

Zai is not found in oracle inscriptions. Its earliest appearance is in *Shu Jing* (11th-6th century B.C.), when *zai* meant 'do the same thing twice'. For instance:

22) *Zhen yan bu zai*.

I say NEG *ZAI*

"I (the king) don't say the same thing twice."

König (1991) points out that the lexical items which express equational propositions can become additive focus particles.

3.2.2 Ye and You: Nouns That Are Basic to Human Experience.

Most Chinese etymologists agree that the original meaning of *you* is 'right hand.' It was written as '𠂇', a profile of the right hand. While there is a controversy over *ye*'s etymology, some etymologists believe that the original meaning of *ye* is 'snake', a reptile that was a danger to ancient Chinese. But a few very prominent scholars insist that *ye*'s original meaning is 'female organ' (Guo, 1964). If these scholars are right, then *ye* and *you* are both human body parts which are most concrete 'source concepts' for grammaticalization (Heine, Claudia and Hümmeryer, 1993). However, these scholars base their conclusion on the

analysis of character structures and anthropological evidence. It is difficult to find the use of *ye* and *you* in their original meanings even in materials as early as oracle inscriptions. In oracle inscriptions *you* is used either as a verb, meaning 'to protect, to bless', or as an adverb, meaning 'in addition, as well as'. Its adverbial use is exemplified below:

24) Jiayin bu, Bigeng li lao you yi niu.

TIME divine NAME sacrifice-cow YOU one cow

"At the time of Jiayin (he) divined and it said that we should offer Bigeng a reserved sacrifice-cow, as well as another cow."

Zhao (1988:301-02) argues that this use of *you* is more like the conjunction *he* 'and' rather than an adverb. He further claims that this use is a 'phonetic borrowing' (*jieyinci*).

As for *ye*, it seems totally impossible to find any use of it as a content word. The earliest use of it we can find is as a sentence-final particle to express a number of moods. For example:

25) ren zhi suo wu he ye?

people PRO NOM hate what YE

"What is the thing people hate?"

<Xunzi:Qiangguo (298-238 B.C.)>

In sentence 25), *ye* collaborates with interrogative pronoun *he* to express a questioning mood.

3.2.3 Zhi

The source meaning of *zhi* is not clear. In old Chinese *zhi* is used as a particle which can express several moods, such as the interjectional mood. For instance:

26) Mu ye tian zhi! Bu liang ren zhi!

mother YE God ZHI NEG forgive person ZHI

"Oh, my mom and God! They both don't forgive me!"

<Shi Jing: Yongfeng>

But it is very unlikely for this use to have any connection with the adverbial use of *zhi*, which did not appear until the South-North dynasty (420-589 A.D.) or even later. We therefore suspect that the adverbial use of *zhi* was triggered by analogy with another classical word '*zhi*', written as '止' (cf. Ota, 1984).

3.3 Verb Serialization and Reanalysis

3.3.1 Verb Serialization

Verb serialization is the linguistic phenomenon in which "notions that would elsewhere be expressed through conjunction, complementation, or secondary predication are rendered uniformly by means of a sequence of verbs or verb phrases" (Larson, 1991). For instance, when a Chinese sentence like the following is translated into English, a purpose complementation is needed:

27) Wo lai tanwang nin.

I come visit you

"I come (here) to visit you."

In 27), two verbs, *lai* 'come' and *tanwang* 'visit', are used in a sequence. The second member of the serial construction is an equivalent to an English purpose complementation, i.e. 'to visit'.

Though it seems that all languages may have verb serialization, some languages, such as West African languages and Chinese, show a much stronger tendency toward verb serialization

than others, such as English. Then a question arises: what factors govern the occurrence of serialization?

Some linguists suggest that verb serialization is fundamentally a lexical phenomenon, tied to the possibility of verb conflation with a small, closed class of verbs such as 'take'. (Lefebvre, 1991; Li, 1991). But other linguists believe that verb serialization is motivated by cognitive reasons. Pawley (1980, 1987) suggests that languages that use serial verb constructions differ fundamentally from those (like English) that don't in the way their speakers cognize or package unitary 'events'. Speakers of serial-verb languages view some events that English speakers consider unitary as a concatenation of fragmented sub-events. Pawley notes: "There is no universal set of episodic conceptual events. Indeed, it seems that languages may vary enormously in the kind of resources they have for the characterization of episodes and other complex events" (1987:350). Givon (1991) argues that if serial-verb constructions indeed reflect a unique strategy of cognitive segmentation of 'events', then pauses of the type that characteristically appear in 'non-serializing languages, at the boundaries of finite verbal clauses, will also appear in serial-verb languages at serial-verb clause boundaries. But his cross-linguistic study proves that such an assumption is not true. Therefore, Givon concludes that "serial verb constructions do not represent a different cognitive way of segmenting reality....It represents the kind of typological variability one finds in most areas of the grammar, where different languages perform roughly-similar speech-

processing tasks by slightly different--though often related--structural means" (1991:175).

The position maintained in this study is similar to that of Givón, but we insist that the semantic relations between the verbs that are serialized must be cognitively iconic.

3.3.2 Reanalysis

The classic definition of reanalysis is given by Langacker, who interprets reanalysis as "change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation" (Langacker, 1979:58). Subsequently, reanalysis has been thought of in terms of a shift from one parametric setting to another.

One of the simplest types of reanalysis, and one very frequently found in grammaticalization, is fusion: the merger of two or more forms across word or morphological boundaries. A common example of boundary shift can be observed in languages that have grammaticalized a direct speech pattern to a new structure of indirect speech. For instance:

28)a I say that: he comes.

b I say that he comes.

3.3.3 Verb Serialization, Reanalysis and Grammaticalization

Verb serialization always triggers reanalysis, and reanalysis typically accompanies grammaticalization. In fact, the effects of conceptual manipulation by reanalysis is so prevalent that some scholars use the terms of grammaticalization and reanalysis as synonyms or near synonyms (Lord, 1976: 179). But a number of linguists insist that there is a difference between them. They argue that grammaticalization has an inherent property

of unidirectionality, whereas reanalysis is not necessarily unidirectional (Heine and Reh, 1984:85).

Bisang (1993) observes that in many languages verbs in serial constructions become 'depleted' (1993:215) and survive as either auxiliaries or adverbs. For example, in Yoraba, the verb 'tun' (repeat) is reanalyzed as an adverb 'again' in a serial-verb construction. The process is illustrated below:

o tun lu mii.

he repeat hit me.

"He hit me again."

[Subj _{VP} [V + _{VP} [V + Obj]]]--[Subj Adv _{VP} [V + Obj]]

<Bisang (1993:220)>

Bisang notes that in a serial construction intransitive verbs may serve to modify other verbs. When they function as adverbs, they tend to show impaired verb properties. If they undergone significant changes in their behavior, they may be reclassified as grammatical morphemes. Most Chinese adverbs whose source meaning was verbal belong to this category.

Bisang further points out that "The position of a verb in a serial verb sequence depends on its temporal ordering with respect to other actions in the series....The historical shift can be from a [Subj V VP] structure to a [Subj Adv VP] structure, or from [Subj VP V] to [Subj VP Adv]" (Bisang, 1993:233). This point is, in fact, a matter of iconicity. As we insisted in the last section, the serial-verb construction has to respect the iconicity of the events that occur in a sequence.

Though Bisang does not use the term reanalysis, his methodology is exactly the same.

Another obvious example is the English *FUTURE* marker, *be going*. Hopper and Traugott (1993:3) suggest that the grammaticalization of *be going* to from a purposive construction to a future marker involves a reanalysis not only of the phrase itself but of the verb following it. In a sentence such as *I am going to marry Bill*, we can see two steps of reanalysis. First, the phrase *am going to* in the sentence can be reanalyzed as: [I [am going to marry Bill]] --->[I am going [to marry Bill]]. That means from 'I am on my way to marry Bill' to 'I am planning to marry Bill'. Second, the reanalysis involves the verb 'marry' also: [I am going [to marry Bill]]-->[I am going to marry Bill]. Here verb 'marry' is no longer a purposive complement, but a main verb.

3.3.4 From Serial Verbs to Adverbs: *Jiu*, *Hai* and *Zai*

It was mentioned in section 3.2 that both *jiu* and *hai* have a motion verb source meaning. When they are used independently they usually take a locative or goal NP as their complement. When they are used in a serial-verb construction, they may undergo reanalysis and subsequently lose their inherent properties, semantically, syntactically, and even phonologically.

Jiu:

According to Liu (1993:188), from the 11th century B.C. to fifth century A.D. there is a tremendous increase in the use of serial-verb constructions in which *jiu* occurs (from 2% of the total appearances to 50%). She divides these occurrences into two patterns according to what kind of word follows *jiu* immediately. These two patterns are given below:

a. Prenominal: *jiu* + Loc-N + V2

b. Preverbal: *jiu* + V2 + N

(Liu, 1993:182)

Fig. 3.1 Serial verb patterns with *jiu*

Since in pattern a. *jiu* is not different from its independent use and is irrelevant to its grammaticalization as a conjunctive adverb, we will ignore it in this study. In the early stage of pattern b, *jiu* was able to maintain its basic semantic property. For instance:

29) Wang *jiu* jian Mengzi.

king JIU visit Mencius

"The king came to see Mencius."

<Mencius>

This pattern of use lasted for a long time. Even as late as the Jin dynasty (263-420 A.D), *jiu* in serial-verb constructions functioned mostly as a verb. For example:

30) Zhuren chen qi, jian chi-yi ren

master morning get up see red-clothes person

shu qiang wei qi jia, jiu shi ze mie.

thousands surround his house JIU look then disappear

"The master got up in the morning and saw thousands of people in red clothes surrounding his house. Once he got close to take a look, they all disappeared."

<Soushen Ji>

During the same time, however, *jiu* was going through some change, as is shown below:

31) jian shizhe, jiu qing zhi.

see envoy JIU invite PRO

"Upon seeing the envoy, (he) went over to invite him."

<Hou-Han Shu>

Here, jiu actually has some kind of antecedent/consequent sense, even though it is not quite obvious. This interpretation is supported by Cao (1987) who claims that during the period of 3rd-6th century A.D., the occurrence of jiu in pattern b (immediately followed by another verb) increased remarkably. It is this type of serial verb construction, Cao says, that represents an important transition stage from which the antecedent-consequent linking function of jiu emerged. One more example is given here:

32) Zhangzhu yuan chu lai huan, jian zhi, jing yun

NAME far go out come return see PRO surprised say

"Zi you he shen? nai wo suo zhong er." yin jiu kan
this have what God BE I NOM plant PRT then JIU cut
zhi.

PRO

"Zhangzhu returned home after traveling far. He was surprised by what he saw of it (the tree) and said:

'What is supernatural about this?! It is simply what I planted.' Therefore, he went and felled it."

<Soushen Ji>

The serial verb jiu in such examples may or may not involve a volitional, spatial movement prior to the verb following it immediately. Instead, determined by the nature of verb series which respects the temporal sequence of the serial actions, jiu indicates a antecedent/consequent relation not only to the verb

following it but also to the actions preceding it (i.e. being surprised and saying those irate words). The consequent sense of *jiu* is particularly visible because of the presence of conjunction 'yin' ('therefore') in the same clause.

Liu (1993:195-96) makes another interesting point. She observes that there seems to be a correlation between the pattern [*jiu* + v] and the information status of its participants. Almost all the referents for *jiu*'s agent and patient represent GIVEN information. This GIVEN status of the participants is established primarily through previous mentioning. Examples 29)-32) show that *jiu* is not used to introduce new participants and that the participants in the *jiu*-clause are highly topical and continuous, in the sense defined by Givon (1982:7-8). Givon has proposed three levels of continuity in discourse:

- a. Thematic continuity: share the same theme at the paragraph level;
- b. Action continuity: coding of events in natural temporal/sequential order;
- c. Topic/participant continuity: same participants.

What is significant about the use of *jiu* in serial-verb construction is that not only the participants are highly continuous, and topical, but the action is also highly continuous in the sense that events are coded in a temporal/sequential order. In other words, the action of [*jiu* + VP] is reported as continuous with and dependent on the preceding event, carried out by a GIVEN agent towards a GIVEN patient (goal). This highly continuous discourse puts *jiu* on the boundaries of events or even clauses. Therefore *jiu* itself in such sequential events may or

may not be interpreted as involving any motion. We believe that it is in such a specific discourse context that *jiu* was reinterpreted as a reduced verb or a near-adverb. More importantly, this reinterpretation is, in fact, structurally a reanalysis in its intermediate stage, which can be illustrated as the following:

[Subj_{vp} [*jiu* + V + Obj]]--> [Subj_{vp} [*jiu* [V + Obj]]]

Jiu's transition from a serial verb to an adverb continues after the Jin dynasty (265-420). The process was not completed until the 13th century A.D. Cao (1987) has clearly identified instances of *jiu* with an obvious antecedent/consequent linking function in *Yijian Zhi* (1123-1202 A.D.):

- 33) Shi xi...er hu de jingfeng-bing jia-
 that night son suddenly get infantile convulsion family-
 ren ci-ri zhi huang fan yi-he yu bi kan, er
 member next day make yellow flag one-CL put that altar son
 jiu tuoran pingtie.
 JIU thoroughly recovered

"That night, their son contracted infantile convulsions as a result of fright. The next day, the family members made a yellow streamer and hung it on the altar; then the child recovered completely."

What is crucial here is that *jiu* occurs before the adverb *tuoran* 'thoroughly', and does not take a patient/goal. Semantically, it implies no volitional or spatial motion. Structurally, it coincides with an antecedent/consequent boundary. By this time, we can say that the reanalysis of *jiu* has completed its final step, namely from a reduced verb or near-adverb to a true adverb:

[Subj_{VP} [jiu [V + Obj]]]--> [(Subj) jiu_{VP} [V + Obj]]

But remember that without its source meaning, a motion verb, *jiu* would not be able to undergo such a development, even if in the same discourse context. What lies behind all this semantic reinterpretation and structural reanalysis is a very basic human cognitive metaphor: space > time > cause. The motional sense of *jiu*'s source meaning is the basis of the whole process. The discourse context is only a trigger for the process.

Hai [huan]:

The development of *hai* [huan] from a serial verb to an adverb underwent a similar reanalysis to *jiu*.

As a motion verb, *hai* [huan] is almost exclusively used as an intransitive verb that means 'to return'. Note that unlike *jiu*, which at its early stage of serial-verb use always shared a patient/goal with the verb following it, *hai* [huan] did not have to have a locative goal in a clause, and the locative goal was always implied contextually rather than being given as a syntactic element. This characteristic makes the reinterpretation of *hai* [huan] as an adverb easier than *jiu*, particularly when the action/situation expressed by the verb following *hai* [huan] is a repeated or continuous one.

Due to its source meaning 'to return', which implies a repetition of walking the same way, *hai* [huan] developed its adverbial use in the sense of 'repetition' through serial-verb construction quite early. For instance, in *Xunzi* (480-256 B.D.) we can see the use of *hai* [huan] in the sense of 'again':

33) Ru shi ze Yu Shun hai zhi, wang ye hai qi.

like this then SUBJECT HAI arrive king career HAI rise
 "(If we do things) like this, good leaders like Yu and
Shun will come to us again and the king's empire will be
 rebuilt."

There are several reasons here for not interpreting *hai* as a verb. First, the verbs following *hai* in the two clauses, *zhi* ('arrive') and *qi* ('rise') respectively, are both intransitive and do not have a complement, which is quite unusual for a typical serial-verb construction. Secondly, if we interpret *hai* as a verb, it would be almost synonymous with *zhi*, the verb follows it immediately, and therefore they can not be in a serial or sequential relation, since they represent the same action. Third, there is always a temporal or purposive relation between two verbs in a serial-verb construction, but there is no such relation between *hai* and the verbs following it, particularly when the subject is inanimate (e.g. *wangye* [king's career]).

Though *hai* developed the adverbial use in the sense of 'repetition' quite early, its other adverbial use in the sense of 'continuity' did not appear until the late Jin dynasty. First, in our data base, the use of *hai* in serial-verb construction was infrequent even as late as the Jin dynasty (265-419 A.D.). For instance, in *Shishuo Xinyu*, we find only a handful of occurrences of *hai* in the serial-verb construction. Secondly, in these serial-verb constructions the meaning of *hai* remains the same as its source meaning. For example:

34) de shi, huan tu yu er er.

get food HUAN spit to two son

"When (he) gets food, he returns (to his home) and spits it out for his two sons."

However, in the same book, there are some uses of *hai* in the serial-verb construction that are ambiguous. One example:

35) (Jiangwen) wen ci bian *hai*/[huan] yue: "Yi dang
NAME hear this then HAI say justice should
zi you nan yi.
self have difficult easy

"After hearing this, (Jiangwen) returned (home)/still saying: 'Justice should have its difficult part and its easy part.'"

The cause of the ambiguity is due to the fact that Jiangwen was indeed on a trip when he heard the news AND he said something similar about justice before. Therefore, we can either imagine that Jiangwen made the remark about justice on his trip, in which case *hai* could be interpreted as an adverb, or he made it after returning home, in which case *hai* could be interpreted as a verb.

However, when a discourse context gives a clear indication about the continuity of the action represented by the verb following *hai*, the adverbial reading of *hai* is more likely. In *Baiyujing*, which was written at about the same time as *Shishuo Xinyu*, *hai* [huan] is quite clearly used as an adverb. For example:

36) fu yu houshi, xin yan bangfu, bian *hai* gui
jia...

woman PRE later heart bored lover then HAI return
home

"Later, the woman got bored of her lover, but she still went back home (to her husband)."

Two facts support our interpretation of *hai* as an adverb. The first is the discourse content. The story is about a married woman who had an affair with another man. She made her husband believe that she died, but actually she left him to stay with her lover. Later, she got bored with her lover and went back to her husband. Certainly her husband would not accept her, since he truly believed that his wife had died. Prior to the text we cited here, the story relates how normal her life was with her husband. So, to the woman, or to any wife, staying with her husband was normal life and going back to her husband was a continuation of her normal life. Secondly, and more importantly, the verb following *hai* immediately, '*gui*', is synonym to the verb *hai* [*huan*]. At that time Chinese was still basically a monosyllabic language and therefore it is not likely to consider '*haigui*' a synonymous compound. (Though Chinese became more bisyllabic later, it never produced a compounding word *haigui*). So we can confidently say that *hai* is used here as an adverb. This development of *hai* from a serial verb to an adverb is structurally a reanalysis also; or rather we should say that it is through reanalysis the concept of *hai* [*huan*] 'return' is manipulated and reinterpreted as *hai* 'still'.

Another piece of evidence is the phonological reduction which is one of the important features of grammaticalization. The present Chinese vowel [ai] is developed from either '*rusheng*' rhymes 陌 'mo' and 麦 'mai' or '*pingsheng*' rhyme 蟹 'xie', but *hai* [*huan*] belongs to neither of them. That means the

pronunciation [hai] can only be derived from phonological reduction. When undergoing grammaticalization, [huan] lost its final consonant. Moreover, in some very conservative dialects, such as the Yue dialect, the adverbial use of *hai* is still pronounced [huan].

By the time of the Tang dynasty (618-907 A.D.), the adverbial use of *hai* in a serial-verb construction had completed its reanalysis. The adverbial function of *hai* can be seen clearly without any ambiguity. For instance:

36) Wo jian bei ren man, yi si yuan zhong jiu.

I see PASS person deceive just like garden inside chives

Riri bei dao shang, tiansheng hai zi you.

daily PASS knife wound born HAI self have

"I see that being deceived by someone is just like the chives in the garden, which are wounded by the knife every day, but still keep their inborn innocence."

<Hanshanzi Shiji (7th century A.D.)>

37) Zisun ri yilai, shishi hai furan.

descendants day since generations HAI like so

"Since that day, the descendants of every generation have been like this."

<Liu Zongyuan: Tianjiashi (8th century A.D.)>

In the first example *hai* can be easily translated as 'still', whereas in the second example *hai* has to be accommodated by a present perfect form of the verb for its meaning of "happening over and over again."

The reanalysis of *hai* through serial-verb construction can be illustrated as follows:

[Subj _{VP} [huan + Verb]]--> [Subj hai _{VP} [V]]

Before reanalysis, *hai* was part of the VP, which contains two serial verbs, and its pronunciation was [huan]. After reanalysis, *hai* is no longer part of the VP, but rather a modifier of the VP. It also underwent a phonological reduction in which it lost its final consonant with some concomitant change in the nuclear sounds. In GB treatment, after reanalysis, *hai* is a member of IP, which has its own head (Ernst, 1993).

Zai:

As mentioned in section 3.1, the source meaning of *zai* is 'do something twice'. It is very easy to derive a general sense of repetition from the sense of 'repeating the same action two times'. *Zai* rarely occurs in serial-verb construction before the time of the late Sui dynasty (581-618 A.D.). But once *zai* appears in a serial-verb construction, it is very easy to be reanalyzed as an adverb with a meaning very close to its source meaning:

- 38) Zhuan wa pianpian luo, xiulan bu kan ting. Kuang feng
 brick tile piece lose rot NEG bear stop wild wind
 chui mu ta, zai shu zu nan cheng.
 blow suddenly collapse ZAI stand very difficult succeed
 "(The house) lost the bricks and tiles piece by piece, it
 just could not resist rotting. When a strong wind blew,
 it suddenly collapsed. It is impossible for it to stand
 up again."

<Hanshanzi Shiji (7th century A.D.)>

Here, *zai* is followed by another verb '*shu*' ('to stand something up') and undergoes a reanalysis. Its reading is no longer limited

to 'doing something TWO TIMES' specifically, but a more general sense of repetition. The process of reanalysis is shown below:

[Subj_{VP} [zai + Verb]]--> [Subj zai_{VP} [V]]

Before undergoing reanalysis, *zai* is one of the two serial verbs in the VP. After the process, it is out of the VP and becomes a member of the IP which dominates VP.

3.3.5 From Analogy to Grammaticalization: *Ye*, *You*, *Cai* and *Zhi*

Unlike *jiu*, *hai* and *zai*, whose grammaticalization is motivated by their source meanings' cognitive values, *ye*, *cai*, *you* and *zhi*, have no such cognitively motivating source meanings. Recall that the source meaning of *ye* is 'snake' or 'female organ,' while the source meaning of *cai* is the locative 'be at', the source meaning of *you* is 'right hand' and the source meaning of *zhi* is not clear. None of them, according to cognitive semantics, can develop their grammatical meanings directly through grammaticalization. We strongly believe that the grammaticalization of *ye*, *cai*, *you* and *zhi* is motivated by analogy rather than by their source meanings.

3.3.5.1 Analogy and Grammaticalization

It is commonly believed that the first person who viewed grammaticalization and analogy as two fundamentally different processes was the French linguist Antoine Meillet (cf. Heine et al. 1991:9). In the following passage quoted from Meillet, he does seem to separate the two processes:

While analogy may only be innovative with respect to the details of form and most often leaves the overall system intact, the "grammaticalization" of certain words creates new forms, introduces categories for

which no linguistic expression existed before, and transforms the overall system.

<Meillet (1912:133)>

No doubt grammaticalization may influence the overall grammatical system of a language, as is the case when the grammaticalization of the verb *liao* ('to complete') leads to the emergence of the perfective suffix *le* in Chinese. In most cases, however, it is far less innovative. Grammaticalization often produces new ways of expressing grammatical notions that are equally well expressed by older, functionally equivalent forms (cf. Heine et al. 1991:29f).

Meillet was by no means unaware of this fact. In another article, he talks about the grammaticalization of content words into conjunctions and relative pronouns:

An important point, which should always be kept in mind, is that in all languages where the transition of words into conjunctions or relative pronouns may be seen to have taken place, there already existed conjunctions and relative pronouns, and that, consequently, these words have only had to conform to already existing models.

<Meillet (1915:168)>

According to Meillet himself, analogy consists in "making one form on the model of another" (Meillet, 1915-16:168). As the quote above points out, this is exactly what takes place in most cases of grammaticalization as well.

We are not denying that analogy and grammaticalization are separate processes. They clearly are. Analogy may well take place

without grammaticalization, and, in cases like the grammaticalization of the verb *liao* into the perfective suffix *le*, grammaticalization may also take place without analogy. In most cases of grammaticalization, however, analogy seems to be an important element. The difference between analogy and grammaticalization is how they start. A word may undergo grammaticalization just because of its source meaning, while a word undergoing analogy has to have something in common with an existing grammatical form, either semantically or phonologically. Therefore, for the former, there is a trace between its source meaning and its grammatical meaning; for the latter, there is no such trace.

3.3.5.2 Earlier forms with functions similar to *ye*, *you*, *cai* and *zhi*

As mentioned in section 3.1, it is impossible for the source meanings of *ye*, *cai*, *zhi* and *you* to be responsible for their grammatical functions as conjunctive adverbs. A more likely way by which their grammaticalization began is analogy. Our diachronic investigation shows that there were some functional words in old Chinese which had similar grammatical functions and analogous phonological properties with *ye*, *you*, *cai* and *zhi*.

From *Fu* to *Yi* to *Ye* through analogy:

In Oracle Inscription (1300-1027 B.C.), there are two words which have similar grammatical functions. One is *fu*, the other is *yi*. The former is written '𠂔', whose upper part is a map of a tribe and whose lower part is a foot turned backwards. The whole character is a semantic compound which means 'to go back to your tribe, to return'. The latter is written '𠂔', which is a frontal

view of a standing person with two dots indicating his/her armpits. The whole character means 'armpit'.

As we have discussed in the case of *hai* [huan], a source meaning such as 'to return' can easily give rise to an adverbial meaning 'again' or 'in addition'. In oracle inscriptions, *fu* is used as adverb already. For example:

39) Dingmau bu, Wuchen fu dan.

TIME divine TIME FU sun

"(He) divined at the time of Dingmao, and it showed that the sun will come out (of clouds) by the time of Wuchen again."

Yi has an adverbial use in oracle inscriptions also. For instance:

40) Kuisi bu, Ku zhen, xun wu zai. Dingqiu yu,
TIME divine NAME divine while NEG disaster TIME rain
Ji yu, Geng yi yu.
TIME rain TIME YI rain

"Ku divined at the time of Kuisi. The result reads that there will not be a disaster for a while. It will rain at the time of Dingqiu and Ji, and it will rain again at the time of Geng."

But it is very difficult for *yi* to develop such an additive meaning from its source meaning 'armpit' directly by grammaticalization. Most Chinese linguists who worked on the grammar of oracle inscriptions agree that the adverbial use of *yi* is a 'phonetic borrowing' (Zhao, 1988:293), namely analogy. They, however, do not give the source of the borrowing. We believe that *yi* gained its adverbial meaning from *fu* through analogy.

It may seem impossible at first glance that *fu* and *yi* have anything in common, as their meanings and pronunciations at present are very different. But the reconstruction of their pronunciations in ancient Chinese suggests that they WERE analogous at the time. In ancient Chinese, both *fu* and *yi* belong to 'ru sheng' (a designation for a syllable ending in a voiceless stop, such as [p], [t] or [k]), and adjacent rhymes (Wu and Xi). Their pronunciations and historical changes have been reconstructed as follows:

fu: *bjuk--> bjuwk--> *fu*

yi: *jAk--> yek --> *yi*

(Cf. Baxter, 1992; Wang, 1958)

According to traditional Chinese philology, if two words have adjacent rhymes, as *fu* and *yi* did, they would be able to borrow from each other semantically and functionally ('pangzhuang' Cf. Zhang, 1932, *Guogu Lunheng*), despite the difference between their initials. The fact that both *fu* and *yi* had an adverbial use in oracle inscriptions supports our hypothesis that *yi* gains its adverbial use from *fu* by analogy, because it would be impossible for *yi* to undergo analogy later when both *fu* and *yi* had changed their pronunciations, as shown above. The analogy could only occur in ancient times when *fu* and *yi* were [*bjuk] and [*jAk], respectively.

Having once obtained adverbial meaning from *fu* by analogy, *yi* continued to undergo grammaticalization. It developed many adverbial meanings, as illustrated below:

a. similarity/sequence:

Yuan bu zai da, yi bu zai xiao.

enmity NEG PREP big YI NEG PREP small

"No matter how great or how small the people's enmity is, (the ruler has to give them full consideration)."

<Shu Jing>

b. similarity/coordination:

Gu zhi de gao, qiong yi le,
old NOM get justice poor YI happy
tong yi le.

rich YI Happy

"In old times, if the society had justice, poor people were happy, rich people were happy too."

<Zhuangzi>

c. concessive: Cai bu cai, yi ge yan qi zhi ye.
talent NEG talent YI each say POSS will PRT
"Talented or not, each of you, please tell me your aspiration."

<Confucius (551-479 B.C.)>

d. mild tone: Wang yi bu hao shi ye, he huan wu
king YI NEG like scholar PRT what worry NEG
shi?
scholar

"(My) Lord (you) don't like scholars anyway, why do you worry about the lack of scholars?"

<Zhanguoce (200 B.C.- 200 A.D.)>

Until the Tang dynasty (618-907 A.D.), these functions had been exclusively performed by yi. But between the Sui dynasty

(581-618 A.D.) and the Tang dynasty (618-907 A.D.), the pronunciation of *yi* had changed into [yek], which was very close to the pronunciation of *ye* [yax] at the time. They had very similar pronunciation with similar main vowels and finals. The reconstructions and historical change of the two words have been postulated as follows:

Yi:*jAk --> yek (Sui, Tang)--> yi (present)

Ye:*jA? --> yax (Sui, Tang)--> ye (present)

(cf. Baxter, 1992; Wang, 1858)

This reconstruction is supported by the fact that in *Guangyun*, a revised and expanded version of the rhyming dictionary *Qieyun*, written in the Sui dynasty (581-618 A.D.), *yi* and *ye* have the same initials (Fanqie shangzi) and are listed in adjacent rhymes (yun). The phonological evidence discussed above and the fact that *ye* did not have typical adverbial uses until the Tang dynasty (618-907 A.D.) enable us to hypothesize that *ye* obtains the adverbial function from *yi* by analogy, because neither the source meaning of *ye*, which is 'snake' or 'female organ', nor its previous use, which was a sentence-final particle, could have given rise to the adverbial functions it performed later.

At the early stage of the analogy, *yi* and *ye* may be used in the same author with the same adverbial function. In *Hanshan Shi*, written between the late Sui dynasty and early Tang dynasty (600-700 A.D.), we find such uses as:

41) Wo zhu zai xiangcun, wu yie yi wu niang; bing
 I live in country NEG father YI NEG mother and
 wu ren jiao wo, pin jian ye xunchang.
 NEG person teach me poor lowly YE common

"I live in the countryside. I have neither father nor mother. Therefore no one can teach me (how to be a good person). I am poor and lowly, as well as average."

In example 41), *yi* and *ye* had exactly the same function, and can be used interexchangeably. But *ye* gradually replaced *yi* later. In *Shide Shi*, written just decades later than *Hanshan Shi*, *yi* is hardly found in adverbial usage, while *ye* is commonly used in an adverbial sense. For instance:

42) Wo shi ye shi shi, you ren huan zuo ye.

I poetry YE COP poetry some people call as ye

"My poems are poems also, but some people call them 'ye'."

Once *ye* completed its development by analogy with *yi*, it underwent further grammaticalization and acquired more meanings as a conjunctive adverb. We will discuss them later in this chapter.

From *Fu* to *You* through analogy:

Besides *fu* and *yi*, *you* is also used as an additive focus particle in oracle inscriptions. For example:

43) Jiaying bu, Bigeng li lao you yi niu.

TIME divine NAME worship sacrifice YOU one cow.

"(We) divined at the time of Jiaying and worshiped Bigeng with stored-sacrifices and a cow."

As mentioned earlier, the source meaning of *you* is 'right hand' which, we believe, could not have given rise to such adverbial meanings as those of *you*. It is commonly accepted that *you* obtained its adverbial function as the result of 'phonetic borrowing', just like *yi*. (Zhao, 1988:301) Though *fu* and *you* have

very different pronunciations in modern Chinese, their pronunciations were very similar until the Song dynasty (960-1279 A.D.). Their history of phonological change has been reconstructed in the following:

Fu: *bjuk --> bjuwk --> fu

You: *wju(k)s --> hjuwH --> you

(cf. Baxter, 1992 and Wang, 1958)

In *Guangyun*, which was revised in the Song dynasty, *fu* and *you* are listed under the same tone (qusheng) and the same main vowel as well as the same final (xiaoyun).

Since you acquired an adverbial function from *fu* by analogy, it has been the most consistent additive focus particle in Chinese. From oracle inscriptions, through classical Chinese, to the present-day Chinese, you has been picking up more and more adverbial meanings. We will discuss them later in this chapter.

From Cai '纔' to Cai '才' through analogy:

As we argued in section 3.1, the source meaning of cai '才' is that of a locative verb, which can hardly develop into an adverbial function; but its alternative cai '纔' (Ota, 1985) has a much clearer source meaning, which means 'light', and from which a restrictive sense can be easily developed. Around the Han dynasty (200 B.C.- A.D. 220) both cai '纔' and cai '才' appeared to be used as adverbs. For instance:

- 44) duo fa, yuan xian cai (纔) zhi, ze Hu you yi
 more send far county CAI arrive then HU YOU already
 qu
 go

"(If we) send more troops, when we just arrive in the far county, the enemy of Hu ethnic will be gone already."

<Han Shu (comp. Ban Gu, A.D. 32-92)>

45) shi cai(才) you shu qian.
 soldiers CAI have several thousand

"There are only several thousand soldiers."

<Han Shu>

As Ota (1984) noted, the adverb *cai* has several alternative forms. One thing these alternatives share is the same pronunciation. But among them, only 纒 has the source meaning which is likely to give rise to the restrictive meaning. Therefore, we believe that the alternative forms of *cai* reflect a typical case of analogy. All the forms acquired their adverbial meanings from 纒 by analogy. The fact that *cai* 纒 and *cai* 才 ' had the same adverbial meanings is not a coincidence, but serves as evidence of analogy between them. These two *cais* have the same pronunciation as early as we can trace. The history of their phonological change has been reconstructed as:

Cai: *dzi --> dzoj --> cai

(Baxter, 1992)

From *Dan* to *Zhi* through analogy:

The source meaning of *zhi*, as we discussed in 3.1, is not clear. But we know that its adverbial function was acquired relatively late, around the South-North dynasty (420-589 A.D.) (Cf Ota, 1985:264). For instance:

46) zhi wei shi jun en, ganxin cong kujie.

ZHI for acknowledge you grace willing follow bitterness

"I willingly follow you and have a hard life only for repaying your grace."

<Checao Shi (502-557 A.D.)>

However, before *zhi* there was another word *dan* which performed similar adverbial function. For example:

- 47) wu yu zhi dang er, fei sheng ye, dan geng
 I ahead know should so NEG sage PRT DAN experience
 shi duo ye.
 thing more PRT

"I knew we should do so in advance not because I am a sage, but because I have more experiences."

<Sanguo Zhi (Comp. by Chen Shou A.D. 223-297)>

Therefore, we assume that *zhi* obtained its adverbial function from *dan* by analogy. Our assumption is supported by two more pieces of evidence. First, in ancient Chinese, *zhi* and *dan* had similar pronunciations. Their initials and finals were same, and their main vowels were similar. This similarity can be seen in the following reconstruction:

Dan: *tan? --> danx --> dan

Zhi: *tje? --> tsyix --> zhi

The second stage of this reconstruction occurs around the Song dynasty (960-1279). Therefore, we assume that before that time *dan* and *zhi* had a similar pronunciation.

Secondly, after *zhi* developed its adverbial function, it went on to combine with copular *shi* and became an adversative conjunction. Again, we find that *dan* can express adversative relation even without *shi*, and it had the exact same process prior to *zhi*. We suspect that this is just a continuation of the

analogy between *dan* and *zhi*. The further analogy is illustrated
blow:

- 48) Doushi da hen, dan Angui su xing gao, yi wei you yi
NAME big hate DAN NAME always act high YI NEG have use
hai zhi.
kill him

"(Because of this) Doushi hated (Angui) deeply. But since
Angui always acted graciously, Doushi never found an
excuse to kill him."

<Hou-Han Shu>

- 49) zongran zisun man shanhe, danshi en ai fei
even if decedents full country DANSHI grace love NEG
qian hou.
in front behind

"Even if I have children everywhere, I can not feel their
love around me."

<Tang Bianwen (618-907 A.D.)>

- 50) Xuan chuang lianmu jie yi jiu, zhishi tang qian jian
door window curtain all still same ZHISHI hall before lack
yi ren.
one person

"The door, the window, and the curtains on them are still
the same, but the person is no longer in the house."

<Baijuyishi (772-846 A.D.)>

As we can see in the examples above, *zhi* almost followed *dan* step
by step.

3.4 Iconicity in Narrative Discourse: Chinese Adverbs as Logical Operators

As we have demonstrated in 3.2, narrative discourse environments are crucial for the reanalysis of verbs, like *jiu*, *hai*, *zai* as adverbs. Since all the verbs which underwent reanalysis are first verbs in serial-verb constructions, they naturally have a sequential relation with the second verbs and previous events. This type of sequential relation is easily interpreted logically as temporal, causal, or conditional in a narrative discourse, where iconicity is generally observed. Note that Chinese adverbs are always used at event boundaries in narrative discourse in which the continuity of theme and participants are very high. Therefore, the relations that these adverbs indicate are no longer interpreted in relation to adverbs and the verbs which follow them, but rather in relation to the events preceding the adverbs and the events following them. It means that the modifying scope of these adverbs are expanded from a single clause to multi-clauses.

3.4.1. *Jiu*: Antecedent-consequent --> Temporal --> Cause--> Condition

It is difficult to distinguish the antecedent-consequent relation from the temporal relation in a narrative discourse, since both involve temporal sequencing. Liu (1993) claims that as an antecedent-consequent linking element, *jiu* simply highlights the direct 'relational dependency' between an antecedent-consequent pair, though as a temporal-linking marker, *jiu* focuses on the brief interval between an event and the temporal parameter. As a matter of fact, it is almost always possible to

have a logical connection between temporal and consequent (causal) relation, that is, for any two events to be immediately adjacent to each other, there already exists a dependency relation. Another piece of evidence which supports the above claim is the fact that *jiu*'s temporal linking function arises at the same time that it obtains antecedent-consequent function. For instance, the following example is cited by Liu (1993:210) to demonstrate the temporal use of *jiu*, but it is obvious that this 'temporal relation' is likely to be interpreted as a causal relation:

- 51) dan zuo yu chu ye, ceng jie maozi,
 just yesterday want go-out visit PRE borrow hat
 jier bu yong jiu huan.
 afterward NEG use JIU return

"(He) just borrowed (your) hat yesterday when he was going out to visit (someone), but since he found that he could not use it, he returned it soon afterward."

<Yijianzhi (1123-1202 A.D.)>

It is difficult to say that in 51) *jiu* only expresses a temporal relation without a causal reading. As a matter of fact, Liu (1993) uses the word *since* in her own translation of the sentence.

As a logical operator, *jiu* can indicate a causal relation even when one event does not immediately follow another. For example:

- 52) nian qi daotu qinjin, cun yu jia jian,
 consider her road hardworking exist PREP family inside
 er wenliang huijie, shi tong gan gu, gu

CONJ kind understanding indeed share sweet bitter CONJ
 jiu yi wei qi.

JIU take as wife

"Considering the fact that she has been hardworking on the trip, kind and understanding to family members, and indeed sharing the difficulties, (he) then/thus took her as his wife."

<Yijianzhi (1123-1202 A.D.)>

In the sentence above, the event of 'taking her as his wife' does not necessarily follow his consideration immediately. But the causal relation between the action and the previous consideration is obvious.

In a causal relation, both the cause and the consequence are realities. But if both of them are something assumed, the relation between them is more likely to be interpreted as a conditional than a causal one. In *Zhuizi Yulei*, written sometime during the Song dynasty (1127-1279), the conditional use of *jiu* can be found:

53) Ruo xin cu zhi cong shi pifu shang chuo guo,
 if heart careless only from thing skin upon sweep past
 ru ci xing quan, bian jiu cuo le.
 like this use power then JIU wrong ASP.

"If (one) is careless and only makes superficial observations, (if) he uses his power in such a way, then he will be wrong."

Here, *jiu* is paired up with the conjunction *ruo* (if) to indicate a conditional relation.

3.4.2 Hai: Repetition/continuity --> Additional Focus -->

Concessive

In 3.2 we have seen the reanalysis by which *hai* acquires an adverbial function. But in its early stage of grammaticalization, *hai* only expresses the repetition or continuation of the same event/state. In a narrative discourse, however, events are reported in sequence. *Hai* is used on the boundaries of events which are not necessarily the same. In this case, *hai* no longer expresses simple repetition or continuation, but functions as an additional focus particle which indicates the additional or further development of a series of events. For instance:

- 54) Nijia qu zhong tian de zhong tian, you zhuangdian de
 you go plant field NOM plant field have tenant NOM
 shi zhuangdian... Nimen hai hao xue lei! yi ri bian
 use tenant you HAI good study PRT one day only
 xue san ju, xue dao si wu shi sui ye hao
 learn three sentence study to four five ten year YE good
 le.

ASP.

"Some of you worked in the field, then continue farming your land; some of you have tenants, then use them. In addition, you have to study hard. If you learn three sentences per day, you will be very knowledgeable when you are forty or fifty years old."

<Liu Zhongjing Yu-enlu (1368-1420 A.D.)>

The above paragraph is the instruction that the first emperor of Ming dynasty (1368-1644 A.D.) gave to the descendants of his deceased generals. He told them that in addition to taking care

of your customary business, you have to study hard in order to become literate. Here *hai* indicates the additional request of the emperor. This additional sense of *hai* became more common later.

One more example:

55)

Xingzhe dao: "Ni *hai* bu zhi wo de benshi." Bajie dao:
 NAME say you HAI NEG know I POSS ability NAME say
 "Gege ni zhi xiang zhe deng bianhua teng nuo ye
 brother you only like this kind change jump move YE
 gou le, zenmo *hai* you zhe deng benshi."
 enough ASP how HAI you this kind ability
 "Xingzhe said: 'You still don't know my ability.' Bajie
 said: 'Brother, you can change (your appearance), jump
 (high) and move (very fast). That's a lot. I wonder that
 you have this kind of ability (living in boiling
 oil) additionally!'"

<Xiyou ji (1500-1600 A.D.)>

The first *hai* in the above example is for continuation, but the second *hai* clearly indicates the additional ability possessed by Xingzhe. As a matter of fact, the second use of *hai* in this example has a 'surprising' sense, something unexpected by the speaker. This type of counter-expectation leads *hai* to a concessive sense. We will come back to this point in the next section.

3.4.3 Zai: Repetition--> Additional Focus -->

Temporal/Conditional

The development of *zai* is quite similar to that of *hai*. Based on its source meaning, *zai* obtained an adverbial function

which expresses repetition by reanalysis in serial-verb construction. But once the events in sequence were no longer the same, *zai* acquired a function which expresses additional or further development of the events in sequence. For instance:

- 56) *yu le ta yi ge wu anzi huangbai kou de*
 give ASP him one CL NEG saddle yellow/white mouth MOD
ke ma, zai zhu shou le yi ge chi mu ru de
 female horse ZAI boil done ASP one CL eat mother milk MOD
fei gaor.
 fat lamb

"(They) gave him a yellow/white-female horse without saddle, and cooked a fat baby lamb for him."

<Yuanchao Mishi (1271-1368 A.D.)>

Giving a horse and cooking a lamb are not the same event, but they are in a sequence of action of helping 'him' (the future emperor of the Yuan dynasty). The latter action is treated as an additional or further development of the former action.

If the temporal parameter is clearly given in a narrative discourse, *zai* may indicate a temporal/conditional relation in the sequence of the events. For example:

- 57) *nimen dou zai zheli xie zhe, guo zheng le qu shi,*
 you all at here rest ASP past January ASP leave when
zai jian wo le qu.
 ZAI seen I ASP leave

"You all stay here. Before you leave here by the end of January, you can come to see me again."

<Liu Zhongjing Yu-enlu (1271-1330 A.D.)>

In this case, *zai* indicates a 'necessary condition' that means 'something will not happen again until a certain time.' This use of *zai* is quite common in present-day Chinese as well.

The other two adverbs *ye*, and *you*, underwent very similar developments as *hai* and *zai* did. Once they obtained some adverbial function by analogy, they went through further grammaticalization and picked up more adverbial functions. Their further development can be illustrated in the following:

Ye: similarity--> additional focus --> temporal/condition

You: repetition--> additional focus --> accumulation

Here are some examples for *ye* first:

- 58) *Ni shuo de shi, wo ye xin li zheban xiang zhe...*
 you say NOM right I YE heart inside this think ASP
 "What you said is correct. I also think the same way."

<Laoqida (1346-1368 A.D.)>

- 59) *Bie ren dongxi xiu ai, bie ren zhezhen ye xiu*
 other person thing NEG love other person needle YE NEG
na.
 take

"Don't desire for things that belong to other people,
 don't even take a needle that is not yours."

<Laoqida (1346-1368 A.D.)>

In example 58), *ye* expresses a simple similarity. But in 59), it expresses similarity to a further degree--although a needle is worth very little, if it belongs to other people, you still should not take it. Therefore, the function of *ye* is no longer to express a simple similarity, but has a scalar sense to further stress a previous requirement. We will come back to this type of

scalar use of *ye* in the next section. Now let's look at its conditional use:

60) *Ruo shi zhe deng, shiye ye bu jiu yuan.*

if COP this type career YE NEG long far

"If (they do things) like this, their career will not last long."

<Liu Shanchang Yuci (1368-1400 A.D.)>

61) *Jiaruo bian shi tu he ni, ye you xie tu qixi, ni*

if only COP soil and mud YE have some soil smell mud
ziwei.

taste

"If they are just soil and mud, they will at least have some smell or taste of soil and mud."

<Xixiangji (1279-1368 A.D.)>

In the first example, *ye* expresses a simple conditional relation in conjunction with ruo. But in second example, *ye* has a weak scalar sense, and the relation expressed by *ye* is somehow between conditional and concessive conditional. When the scalar sense is very strong, the relation expressed by *ye* is more likely interpreted as concessive conditional or purely concessive. For instance:

62) *erjin yiqi shuo de kucao, bian geng kan ershi nian*
now together say COMP boring if again read twenty year
ye zhi bu jishi.

YE just NEG work

"Now, everybody got bored of reading (Confucius' works). Even if they read the books for another twenty years (in this way), they would not be able to put them to use."

<Zhuzi Yulei (1130-1200 A.D.)>

- 63) Suiran shi sishou de yi shi ban ke, ye
 though COP stay-together COMP one hour half quarter YE
 hezhe an fuqi gong zhuo er shi.
 COMP I wife-husband share table CONJ eat

"Though we can only stay together for a short while, (at least) we as a couple have a chance to eat a meal at the same table."

<Xixiangji (1279-1368 A.D.)>

In example 62, the relation expressed by *ye* is concessive, which entails both condition and consequent. While in sentence 63), the relation expressed by *ye* is concessive conditional, which entails only the consequent (König, 1988, 1992). All the examples show that the different functions of *ye* are developed in different discourse contents. When the events are not realities, their relation is a conditional one; when they are all realities, their relation is a concessive one; when only the consequent is a reality, the relation between them is a concessive conditional one. This type of discourse content constraint does not only apply to *ye*, but it also applies to the other adverbs we discuss in this study.

Now, we turn to *you*. After obtaining an adverbial function through analogy from *fu*, *you* went on to further grammaticalization. Its function extended from expressing repetition to a general additional sense, then to accumulation of relevant events in discourse. Some examples follow:

- 64) Sha le yi ge chi mu ru de fei gao, you pi
 kill ASP one CL eat mother milk MOD fat lamb YOU leather

tong li cheng le ma naizi...

pail inside fill ASP horse milk

"(They) killed a fat baby-lamb, and filled a leather pail with horse milk..."

<Yuanchao Mishi (1271-1368 A.D.)>

65) Wo shang wu pian wa, xia wu zhui di; laogong you

I up NEG piece tile down NEG needle land husband YOU

bu yao wo, you wu qinqi touben...

NEG want me YOU NEG relative go

"I don't have a roof over my head, nor an inch of land under my feet. And my husband no longer wants me; I have no relative to turn to either..."

<Jiantieheshang (1127-1368 A.D.)>

In example 64), killing a lamb and filling a pail with horse milk are not the same action; therefore, the function of you is not to indicate the repetition of the same action, but to express an additional action in a sequence. In example 65), there are no repeated actions, nor is all the information even in sequence. But they are all relevant to the helpless situation of 'wo'. The function of you is to accumulate the relevant information in order to draw a complete picture of the situation.

3.5 Presupposition and Expectation: from Propositional to Expressive Values

We have seen that Chinese adverbs can function as focus particles. According to their semantic functions, they can basically be divided into two groups. One is additive particles, which include *ye*, *hai*, *you*, and *zai*. The other is restrictive particles, which include *jiu*, *zhi* and *cai*. Most focus particles

induce an order for the value of the focus and the alternatives under consideration. The value of the focus is characterized as ranking 'high' or 'low' on a scale of some relevant value in a given situation. For instance, *jiu* expresses a value which is 'low' on the scale, while *cai* assumes a value which is 'high' on the scale. That means focus particles presuppose an evaluations in the context. König (1991b) claims that evaluation should be analyzed as conventional implicatures because of their essentially deictic characters. (Conventional implicatures, he argues, are deictic in nature, since they express a direct relationship between an aspect of the context and a linguistic form.) This type of conventional implicature sometime interact with people's expectations in a real conversational situation. The expectation can be either confirmed or denied in a given discourse. The resulting expression would be highly expressive or subjective. It is particularly so when the evaluation is expressed by a scalar focus particle.

In this section, we discuss the process by which Chinese adverbs acquired their modal functions.

In her analysis of the adverb *you*, Biq (1988) points out that *you* can express both objective and subjective accumulation. The subjective mode, according to Biq, concerns the accumulation of properties whose relevance to one another is conceivable or justifiable from the speaker's point of view. With this mechanism, the speaker can express his/her (strong) evaluative attitude toward the issues at hand. Biq further points out that the subjective mode is found to be used only in conjunction with special types of linguistic structures conventionalized for

achieving certain communicative ends. Two such special structures she identified are rhetorical question and sentence-refutation.

For example:

- 66) Ruguo Qihua ai zhangfu er yuanyi fangqi hunyin,
 if NAME love husband then willing give up marriage
 ziji ai Lixing you hebi jianchi hunyin ne?
 self love NAME YOU why insist marriage PRT

"If Qihua is willing to give up her marriage because she loves her husband, then why do I have to insist on marriage when I love Lixing?

- 67) Ta you bu shi gui, ni pa shenmo?
 he YOU NEG be ghost you fear what

"(But) he is not a ghost! What are you afraid of?"

Biq (1988:111-13)

In both 66) and 67), you conveys meanings that cannot be translated by 'again', nor by 'also', nor by any other similar gloss for repetition or accumulation. On the contrary, you in these sentences conveys an expressive meaning, encompassing the speaker's point of view with respect to the issue at hand. Though we don't know when this process started, we can consider it an on-going grammaticalization, or grammaticization, as preferred by some linguists who pay more attention to the synchronic aspect of the process.

Other Chinese adverbs have the similar development in similar linguistic structures.

- 68) Mai shi mai si shu liu jing ye hao, zenmo yao
 buy when buy four book six classics YE good why want

na yideng pinghua?

that kind novel

"(If you want) to buy some books, Confucian classics would be good. Why (do you) want to buy that kind of novels?"

<Pushitong (1346-1368 A.D.)>

Here, the adverb *ye* can not be interpreted as 'also' or 'too', since it expresses speaker's attitude toward the issue at hand, namely his preference for Confucian classics. This type of assertative modality is expressed in conjunction with a rhetorical question as well.

69) Ta zhao le wo lai de, you bu shi wo zhao le ta lai

he find ASP I come NOM YOU NEG be I find ASP him come

de, ni jiao wo zenmoge xiaoxin far ne?

NOM you let me how careful method PRT

"(It was) he who came to look for me, but I didn't look for him. How can you blame me for (not avoiding) him carefully?"

<Ernü Yingxiong Zhuan (1800-1900 A.D.)>

In 69), you can not be interpreted as 'repetition' or 'accumulation'. It expresses the speaker's attitude toward the complaint that she should not contact a man. She used both sentence-refutation and rhetorical question to make her point.

70) Ni zuori zai citang na yifan feifu zhi tan, hai

you yesterday at temple that CL heartily MOD talk HAI

bu di jiu wo yi ming mo? hai bu shi wan wo

NEG equate save I a life PRT HAI NEG be complete my

zhong sheng mo? wo you gai zenmo yang ne?

entire life PRT I YOU should how like PRT
 "Did your hearty words at the temple yesterday save my
 life? Did your words complete my entire life? How can I
 expect anything more?"

<Ernü Yingxiong Zhuan>

Here 70), *hai* can not be interpreted as 'continuation' and *you* can not be interpreted as 'repetition'. Both of them are used to express the speaker's attitude. The speaker, a girl who falls in love with a man, uses *hai* and *you* to express her appreciation of the man's sincere love. Since the man thinks he hasn't been nice enough to her, the girl tells him that his words mean much more than she expected. Here the modal meanings of *hai* and *you* are expressed in the form of both sentence-refutation and rhetorical question and in interaction with the speaker's and listener's expectations.

In the above examples, the expressive meanings of Chinese adverbs are all expressed in specific linguistic structures, i.e. rhetorical question and sentence-refuting. But this is not the only way to obtain subjective modal meanings for the adverbs. Chinese modal adverbs can express very subjective meanings when a speaker's expectation in a specific situation is confirmed or denied (in the interaction with what has been presupposed). For example:

- 71) "Gonggong ke teng ta ya, chang shuo na haizi you
 grandpa KE love him PRT always say that child have
 chuxi." He xiaojie dao: "Zhe haizi ya, wo zhi shuo
 promising NAME miss say this child PRT I ZHI say

ta mei chuxi."

he NEG promising

"Grandpa really loves him and always says that the child is very promising.'Miss He said: 'I was saying the child is not promising.'"

<Ernǚ Yingxiong Zhuan>

In 71), Miss He is surprised by the fact that the Grandpa thinks the child is more promising than she does. Her surprise is expressed bz zhi. As a restrictive focus particle, *zhi* presupposes a low value. But now it is used in the interaction with a denied expectation. This interaction gives *zhi* a subjective, expressive meaning for Miss He's surprise.

72) Ni wo xiangchu le liang nian, wo jing bu zhidao ni
you I know ASP two year I even NEG know you
zhemo shou qiao, hai hui hua ne.
so hand skilled HAI can paint PRT

"We have known each other for two years, (and) I didn't even know you are so talented that you can paint."

<Ernǚ Yingxiong Zhuan>

As a scalar focus particle, *hai* usually presupposes a high value. But here, the speaker surprisingly finds that his friend has even more talent than he expected. So his being talented is confirmed the use of *hai* in its scalar sense.

In this section, we have demonstrated that the modal functions of Chinese conjunctive adverbs are associated with specific linguistic structures, such as rhetorical questions and sentence-refuting, and with interaction between presupposition

and expectation in a given discourse. These findings confirm what we have observed in present-day Chinese in Chapter 2.

3.6 Rhetorical Structure and the Prominence of Chinese Conjunctive Adverbs

It is mentioned in previous chapters that rhetorical structure can be seen as the grammaticalization of clause relations, and the grammar of clause combining may differ from one language to another (Mattiessen and Thompson, 1986). It is also pointed out that Chinese conjunctive adverbs have a much more prominent role than their counterparts in English or German (König, 1991b; cf. chapter 2). This section discusses the differences between Chinese and English rhetorical structures and explores the cause of the prominent role played by Chinese adverbs in clause combining.

In order to see the difference between the rhetorical structures of various languages, identifying the location and types of connectives is crucial (Matthiessen and Thompson, 1988:186-187). It is well known that English heavily depends on conjunctions in clause combining, and in hypotaxis the location of connectives are always in the satellite clauses. Chinese tends to use adverbs instead of conjunctions in clause combining and the location of these adverbs is in the nucleus clauses. This basic difference between English and Chinese can be illustrated in the following example:

- 73) 1. Wo jiao ta xiao ming,
I call him nick name
2. ta jiu da wo.
he JIU beat me

3. Bie ren dou lai quan jia,

other person all come stop fight

4. ta ye bu ting.

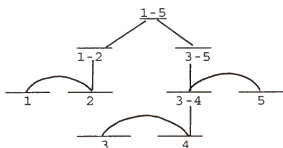
he YE NEG listen

5. Hai ba chu daozi xiahu ren.

HAI pull out knife threaten people.

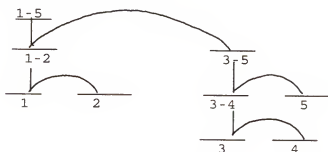
"He beat me (just because) I called him by his nickname. Though every body tried to stop the fight, he wouldn't. (And) he even pulled out a knife to threaten them."

The rhetorical structure of 71) can be diagrammed as follows:



In the narrative diagram above, *jiu* is used in clause 2; *ye* is used in clause 4; *hai* is used in clause 5. Clause 2 states the result caused by calling somebody by his nickname; clause 4 states a consequence under an extreme condition expressed by clause 3; clause 5 states the further development of the incident. Therefore, *jiu* is used to indicate a causal relation, *ye* to indicate a concessive relation, and *hai* to indicate a further development of the same event. There are two striking features. First, the relations between clauses are indicated by adverbial connectives, rather than by conjunctions. Second, as the diagram clearly indicates, all the adverbial connectives

occur in nucleus clauses. Now, let's examine the rhetorical structure of the English translation of 73):



There are two obvious differences in the diagram above from its Chinese version. First, the relations between clauses are indicated by conjunctions (*because, even though, and*) rather than by adverbs. Second, these conjunctions occur in satellite clauses rather than in nucleus clauses.

However, the aim of our analysis is not just to show the differences between Chinese and English rhetorical structures, but to explore the cause of the difference and the role of Chinese conjunctive adverbs in the formation of those differences.

James Tai (1985) points out that the essential strategy of Chinese grammar is to knit together syntactic units according to some concrete conceptual principles, such as PTS (The Principle of Temporal Sequence). PTS states that the relative order between two syntactic units is determined by the temporal order of the state they represent in the conceptual world. In other words, Chinese grammar reflects principles corresponding to the conceptual world to a much larger extent than it does grammatical rules operating on syntactic and morphological categories. In light of grammaticalization theory, we can say that in Chinese the grammaticalized structures are originally iconically

motivated structures (cf. Haiman, 1985). For example, in Chinese the directional locative *cong* 'from'-phrase can only occur before the verb:

74) a. *Ta cong Zhongguo lai.*

he from China come

"He came from China."

b. **Ta lai cong Zhongguo.*

According to PTS, a plausible explanation is that the *from* phrase specifies a starting point and therefore a state before that of action. This is supported by the fact that *cong* ('from') is etymologically a verb.

Tai mainly deals with syntactic structures. As a matter of fact, Chinese rhetorical structure follows the same iconicity principle. The clause order in Chinese mainly follows this iconicity principle even in expository texts, as we have demonstrated in Chapter Two. A more important fact is that Chinese conjunctive adverbs can be used only to indicate the relations between clauses when the iconicity is respected by the clause order. Once the iconicity is broken, the conjunctive adverbs can no longer be used. Instead, a conjunction has to be used to indicate the relation between clauses. This phenomena is illustrated as follows:

75) a. *Ta ma wo, wo jiu da le ta.*

he scold me I JIU beat ASP him

"I beat him, because he scolded me."

b. *Wo da ta, yinwei ta ma le wo.*

I beat him because he scold ASP me.

"I beat him, because he scolded me."

In 75)a, the two clauses are structured according to the temporal sequence of the events, and the causal relation between them is indicated by the adverb *jiu*. In 73)b, however, the sequence of the events is not respected; therefore, a conjunction *yinwei* *because* has to be used to indicate the causal relation between the clauses.

Two questions arise at this point. First, since Chinese has grammaticalized the iconically motivated structures, including rhetorical structure, in the form of word order, why does it still need conjunctive adverbs to indicate the iconic relations? The answer is that word order (including clause order) is an unmarked grammatical means in Chinese to indicate semantic relations, while conjunctive adverbs can be seen as the minimal markedness of the grammaticalized iconically motivated structures. In this sense, the grammaticalization of Chinese conjunctive adverbs can be seen as part of the grammaticalization of Chinese rhetorical structure, both of which are motivated by iconicity. Second, since Chinese can indicate the relations between clauses by conjunctions when the iconicity is not respected, though it is not preferred, how can it be claimed that the iconically motivated structures have become grammaticalized in Chinese? In order to answer this question, we have to distinguish 'semantic iconicity,' which corresponds to the state of real world, from 'pragmatic iconicity,' which states: attend first to the most urgent task (Givon, 1989). What Chinese has grammaticalized is semantic iconicity, rather than pragmatic iconicity. The pragmatic iconicity can be expressed by conjunctions in both Chinese and English. Therefore, precisely

speaking, as part of the grammaticalization of Chinese rhetorical structure, the grammaticalization of Chinese conjunctive adverbs is motivated by *semantic iconicity*. Or we can say that the reason that Chinese conjunctive adverbs have much more prominent functions than their counterparts in English is that in Chinese the iconically motivated structures have become grammaticalized, whereas in English these structures have not yet become grammaticalized. The iconicity in English is more a pragmatic realization, than a grammatical realization.

3.7 Clause-Initial Position, Topic Continuity and the Prominence of Connective Functions of Chinese Conjunctive Adverbs

In this section, we further explore how the conjunctive function of Chinese adverbs attains prominence.

We have mentioned earlier that in a serial verb construction, two verbs represent two events in a sequence. When the first verb is reanalyzed as an adverb, it automatically appears on the boundary of the events. This boundary position is one of the factors which make the adverb a connective. The event boundary position for adverbs can be produced not only by serial verb construction, but also by topic continuity.

It is commonly believed that Chinese is a more topic-oriented language, compared with subject-oriented languages such as English. In Chinese, once the topic of a discourse is established (in the form of a preverbal noun phrase), it will not be repeated in the following clauses, since it has become given information. The writer or participants in a conversation simply add more comments (or new information) on to the topic until they switch to a new topic. Though topic continuity and subject

deletion can be also formed in other languages, such as English, they are not as prominent as Chinese.

The relationship between the clause-initial position and the conjunctive functions of Chinese adverbs has been discussed in detail in Chu (1991) and Liu & Chu (1993). Chu (1991) was the first to point out that the motivation for placing a Chinese adverb in front of the subject rather than in front of the predicate is to give prominence to its conjunctive function in discourse. He demonstrates the fact by the following examples:

76)a Wo mingtian jiu yao ban dao Chen jia qu le.

I tomorrow JIU will move to NAME family go ASP

"I will move to (stay with) the Chens tomorrow."

b Mingtian wo jiu yao ban dao Chen jia qu le.

tomorrow I JIU will move to NAME family go ASP

In isolation, these sentences are synonymous and differ only in the position of the movable adverb *mingtian* ('tomorrow'). Yet, suppose there is a preceding context like 77) below:

77) Zai Gancheng zhao fangzi kezhen bu rongyi, huale

at Gan-city look-for house really NEG easy take-ASP

wo yige duo xingqi cai zai Chen Jiaoshou jia zhaodao

I a-CL more week CAI at NAME Professor home find

yijian fangjian.

a-CL room

"It is very difficult to look for housing in Gainesville. It took me over a week before I found a room at Prof. Chen's."

76)b more appropriately follows 77) than 76)a. The reason obviously is that *mingtian* tomorrow at the clause-initial

position is more easily interpreted as a conjunction than otherwise.

Liu and Chu (1993) further claim that moving an adverb to the front of a clause is a process of grammaticalization of the adverb's discourse function. As clause connectives generally occur between clauses, a constituent placed in the pre-subject position is more likely to take on a conjunctive function than anything else in that clause or in a preceding clause. This process can be illustrated by the different functions of *ke*:

78) a Mama, kuai na chide, ke e huai le.

mother quick bring eat-NOM KE hungry bad ASP

"Mom, bring some food. Quick! I'm just starving."

b Haole, wanan haole. Zhexia wo ke fangxin le.
good-ASP complete good-ASP this-time I KE not-worry ASP

"OK now, completely OK now. Now I don't have to worry
anymore."

c Tongzhimen, diyipao ke yao daxiang a!

comrades first-shot KE must make-noise A

"Comrades. we must make some noise at first shot."

b Da Shui ke bi shei dou qinjin.

NAME KE be who all diligent-careful

"Da Shui is certainly more hard-working and careful than
anybody else."

79) Wo xihuan dushu, ke ta xihuan yundong.

I like reading KE he like sports

"I like reading, but he likes sports."

There is quite a rich set of adverbial meanings expressed by *ke* in 78) a-d. The *ke* in 78)a focuses on the adjectival predicate,

while the one in 78)b indicates a finality of the situation, the one in 78)c adds a necessity interpretation to an imperative, and the one in 78)d expresses a certainty in a narrative (Beida, 1982). But once *ke* occurs in a pre-subject position such as in 79) the only possible meaning it has is an adversative one, namely a conjunction. We see some major characteristics of grammaticalization here: Semantic bleaching (loss of semantic content), decategorialization (loss of membership of in the original category) and recategorialization (the gaining of new category). That is why we consider moving an adverb to a pre-subject position as a process of grammaticalization of the adverb's conjunctive function.

We have demonstrated that clause-initial position is one of the favorable conditions for the grammaticalization of conjunctive adverbs. Since Chinese is a topic-oriented language, its zero subject through topic continuity provides ample chances for adverbs to occur in such clause-initial positions. It is one reason that Chinese adverbs have more prominent conjunctive functions than their counterparts in languages such as English. This difference can be illustrated as follows:

- 80) Wo qi le chuang, yikan shijian hai zao, jiu qu pao le
 I get ASP up see time HAI early JIU go run ASP
 yi huir, you zuo le yi tao cao, cai kaishi zuo
 a while YOU do ASP one CL drill CAI start make
 zaofan.
 breakfast

"I got up and found it was still early. Then I ran for
 a while and did one set of drills. Only after that I

started making breakfast."

In 80), the topic of the text is *wo* I which is the subject of the first clause. Once the topic is established, *wo* is not repeated in the following clauses due to the continuity of the same topic. But in its English translation, the topic 'I' appears three times as the subject in different clauses. More importantly, once the topic does not repeat itself in Chinese, the clause-initial positions are left to the following adverbs *jiu*, *you*, and *cai*. When these adverbs occupy clause-initial positions, they are certainly on the boundaries of events and consequently function more like connectives.

3.8 Theoretical Underpinnings for the Grammaticalization of Chinese Adverbs: The Example of Jiu

We have discussed the major steps of grammaticalization of some Chinese conjunctive adverbs. Now we intend to further address the questions: What motivates the changes? What are the mechanisms involved in the process? In this section we attempt to provide some cognitive and discourse explanations for the conceptual expansion of the use of *jiu*.

3.8.1 Image Schema and Metaphorical/Contextual Manipulation

It has been proposed (Heine et al, 1991) that metaphor and contextual reinterpretation are the two major forces responsible for conceptual transfers in the process of grammaticalization. Sweetser (1988, 1991) has further argued that grammaticalization and semantic shifts in general can be explained by inferences from topological image schemata. Therefore, the grammaticalization of the English future marker '*be going to*' can be seen as a metaphorical mapping of the motion '*go*' into

futurity, which preserves three major features of the schematic structure: 1) the linearity between locations; 2) the location of ego at the source; 3) the movement away from the proximal source towards a distal goal (Sweetser, 1988:391-92). A similar analysis applies to *jiu*.

As we have pointed out earlier, the source meaning of *jiu* refers to a SPATIAL MOTION towards a LOCATIVE GOAL. The basic meaning of *jiu* is 'to bring oneself to the deictic center of the GOAL'. Taking oneself as an agent (A), the source meaning of *jiu* can be topologically represented as:

A--> A--> A--> Goal

There are three major features in the diagram above:

- a) the change of state or location over time
on the part of A;
- b) the movement/action toward a definite goal;
- c) the spatial boundary of the goal.

This image-schematic structure of *jiu* can be projected to other semantic domains through metaphorical and contextual manipulations, which allow the verbal *jiu* to be used in a wide range of contexts. The three variables in the schema are therefore constantly being extended to include less central members. For example, on the basis of the metaphorical concept ACTION IS PATH or ACTION IS MOVEMENT, taking action 'to accomplish a certain task' or 'to achieve a certain goal' can both be perceived as moving in space towards a definite location. What is highlighted in this metaphorical transfer is the notion of a DIRECTIONAL PROCESS: both spatial movement and non-spatial action involve a process directed towards a goal. Moreover, while

an actor is prototypically human, inanimate objects can be metaphorically treated as action-takers, changes state over time. The concept of a spatial/locative boundary can be employed to refer to a person, a physical object, or even an abstract entity, since metaphorical mappings allow conceptual transfer among these semantic categories (Claudi and Heine 1986).

The shift from verbal *jiu* to various non-verbal functions also involves partial transfer of the above image schema.

The limiting function of *jiu* has to do with its deictic nature. As a motion verb, *jiu* marks movement towards a new deictic center (the goal). As a movement is channeled towards a definite locus against a larger background space, the limiting *jiu* points to a referential boundary against a more general expectation. The boundary in space therefore corresponds to the boundary in referential scope. The pragmatic inferences underlying the conceptual transfer are as follows:

approaching > narrowing in spatial boundary > narrowing in conceptual scope

The limiting usage involves some kind of a conceptual 'boundary', based on the spatially bounded nature of the action *jiu* itself.

The antecedent-consequent linking *jiu* involves a change of events, based on the locational change of the actor. The action circumstance, and is later grammaticalized to mark the consequent itself when it is followed by another active verb which represents another event. The change in locational space corresponds to the change in the line of events.

The temporal linking use of *jiu* is made possible through metaphorical mapping from space to time. It is well-established

that the spatial domain normally provides the basis for describing temporal relations, as illustrated by the 'go-to future' in English. Similarly, in the case of *jiu*, the spatial-temporal shift manifests the conceptualization of a temporal event in terms of spatial movement: 'approaching something in space' is interpreted as 'going to do something soon'. As movement always involves time, the conceptual transfer from spatial boundedness to temporal boundedness necessarily entails all the schematic features of motion *jiu*.

As for the concessive conditional use, *jiu* serves to mark a non-factual condition. The 'non-factual' aspect of *jiu* seems to stem from a pragmatic inference of the feature 'moving towards': approaching a goal implies 'not quite reaching the goal yet'. And when this notion of 'not reaching' is applied to propositional modality, it gives rise to a 'non-factual' interpretation:

- a. Approaching a goal > Not quite reaching it
- b. Taking a condition into account > Not quite fulfilling the condition

It is interesting to note that some concessive connectives, such as English *in spite of* and *despite*, are originally applicable only to human argument and later extended to propositional relations, as pointed out in König (1988). Likewise, *jiu* is originally associated with human action/movement, and eventually applies to textual entities.

What is crucial in all the above transfers is the potential that spatial characteristics of movement can be used to conceptualize various semantic and grammatical relations. This seems to suggest that spatially based expressions (or the domain

of SPACE) can be viewed as the structural basis for describing non-spatial domains (cf. Heine et al 1991: 187-91, 258).

3.8.2 Regularity of Semantic Change

Traugott has proposed in several of her works that semantic changes or meaning shifts in general follow a regular trend from **propositional** to **textual** to **expressive** or from externally situated meanings to internally situated meanings (1983, 1988, 1989). This regularity can account for, for instance, the shift of the English word *while*, from a temporal adverb to a textual conjunction, and then to a contrastive marker.

The verbal use of *jiu* serves mainly to report an event/state, which pertains to the propositional content. The change of *jiu* from a serial verb to an adverbial marker for linking or concessive conditional uses observes one aspect of the regularity: from the **propositional** to the **textual** domain. From describing an action/motion at the propositional level, *jiu* is used to encode various functional facets of coherence. The linking function has more to do with temporal or relational dependency between propositions. The concessive conditional use has more to do with modality and truth relations between propositions. The motivation for these changes may be viewed as 'pragmatic strengthening', as discussed in Traugott (1988), or 'context-induced reinterpretation', as discussed in Heine et al. (1991). There are two factors we should consider regarding the emergence of the linking use. First, the verb following *jiu* appears to be more informative in semantic content. Secondly, *jiu*, as a type of serial verb, happens to occur in a bipartite narrative sequence. Therefore *jiu* is subject to the

reinterpretation (structural reanalysis) as marking the sequential relation. The originally unmarked propositional relation is then overtly marked with the new sense of *jiu*. Such a reinterpretation is preferred, since it strengthens pragmatic informativeness and textual coherence by overtly anchoring the inter-clause, antecedent-consequent relationship.

The development of *jiu* from temporal linking to marking 'denying-expectation' complies nicely with another tendency in semantic change: words tend to shift from externally-situated meaning to more 'expressive', 'subjective' or 'evaluative' meanings. By responding deliberately to a presumed expectation, the 'denying-expectation' use of *jiu* inevitably increases the expressiveness of the utterance and strengthens subjectivity.

3.8.3 Discourse Motivation

Besides the cognitive factors in the grammaticalization of *jiu*, the discourse structure is crucial for the 'context-induced reinterpretation'. From the point of view of a narrative, a spatial motion verb, besides its event-reporting function, is typically used to signal a shift in discourse scene as the participant moves from one place to another. *Jiu*, in the first verbal position of a serial verb construction, is capable of signaling such a locational/spatial change.

As a verb directly followed by another action verb in a serial verb construction, *jiu* is, on the one hand, deprived of the prototypical function of a verb to report events on its own, and thus becomes less verbal (Hopper and Thompson 1984). But on the other hand, it is reinforced, by the discourse patterning, as a sequential, event-linking element, since its position coincides

with a shift in narrative sequencing. This discourse structure helps the change of *jiu* in its categorial status. *Jiu* shifts from a serial verb describing the consequent event/action to a marker of the consequent itself:

EVENT 1, [*JIU* VP] event 2

> ANTECEDENT *JIU* CONSEQUENT

The concessive conditional use of *jiu* is based essentially on the co-occurrence of two normally incompatible propositions. A concessive marker not only introduces an extreme condition with irrealis modality, it also relates the condition to the consequent, whose eventuality is independent of the condition (König, 1986, 1988, 1991). In the case of *jiu*, the semantic implicature of 'not reaching' and its discourse patterning with two normally dissonant or irrelevant propositions allow *jiu* to be taken as a concessive conditional marker.

The use of *jiu* to mark expectation-denying and its limiting function are highly relevant to discourse-level considerations. In order to counter an expectation, there has to be some kind of contextually based 'presupposition' regarding the actualization of a given proposition. The expectation-denying use of *jiu* is essentially rooted in the interactional mechanisms of discourse communication. The limiting use of *jiu* signals a contrastive focus in a distinct way. It pertains to all the discourse-pragmatic factors for marking 'contrastiveness', as suggested in Chafe (1976).

Besides the local discourse structure, some 'macro-discourse structures' of Chinese also help motivate the grammaticalization of *jiu*. First, the rhetorical structure of Chinese is the

grammaticalization of clause combining with respect to iconicity in narratives. It requires the minimal markedness of grammatical relations between clauses. Since the semantic properties of Chinese conjunctive adverbs have the same respect to iconicity, they become grammaticalized to indicate the relations.

Second, Chinese is a 'topic-oriented' language. A continued topic frequently puts adverbs in clause-initial positions, which are on the boundaries between events. The adverbs in clause-initial positions are likely to be reinterpreted as connectives.

Notes

¹. Yang's uncle was a prominent linguist of the 1920s. His work on Chinese functional words *Ci Quan* (The Explanation on Chinese Function Words) is one of the most important works in the field.

². *Tang Bianwen* was a type of literary form in Tang Dynasty. It was written for singing and telling stories. Its language is very colloquial. Scholars consider *Tang Bianwen* one of the earliest records of spoken Chinese.

³. *Ming Qing Xiaoshuo* is the collective term for the novels written during Ming and Qing dynasties. Their language is colloquial.

⁴. *Shuo Wen Jie Zi* is written by Han dynasty scholar Xu Shen. It is considered as the first etymological dictionary of Chinese. Its most significant contribution to Chinese linguistics is its pioneering use of *Liu Shu* (Six Principles of Chinese character formation).

CHAPTER 4
EVIDENCE OF GRAMMATICALIZATION
IN ALLIED AREAS OF CHINESE GRAMMAR:
THE GRAMMATICALIZATION OF CHINESE FUTURITY

4.1 Introduction

The processes of grammaticalization demonstrated in previous chapters can be observed in other areas of Chinese grammar as well, most prominently in Chinese auxiliaries. In this chapter we will analyze the evolution of Chinese futurity markers *jian*, *hui* and *yao* to provide further evidence for the phenomenon of grammaticalization in Chinese. Some typical processes of grammaticalization, such as reanalysis and metaphorical extension can also be seen in the futurity markers.

Due to its complex semantics, especially its inextricable tie with modality, *FUTURE* has consumed enormous amounts of linguists' energy and continually attracts their attention. A short list of recent works on the topic includes Abraham 1989; Bybee and Pagliuca 1985, 1987; Bybee, Pagliuca and Perkins 1991, 1994; Coates 1983; Comrie 1985; Fleischman 1982; Harris and Ramat 1987; Heine 1993; Palmer 1986. With the recent development of grammaticalization theory (Lehmann 1982, 1985, 1987; Heine and Reh 1984; Heine, Claudi and Hünemeyer 1991; Heine 1993; Hopper and Traugott 1993; Traugott and Heine 1991), we can now have a better understanding of *FUTURE* and its related linguistic phenomena.

4.2 Some Hypotheses on FUTURE in the Grammaticalization

Framework

4.2.1 The Definition of FUTURE

The focal use of future is equivalent to a prediction on the part of the speaker that the situation in the proposition, which refers to an event will take place after the moment of speech (Bybee and Pagliuca 1987, Bybee, Pagliuca and Perkins 1994).

4.2.2 Sources of FUTURE

- a. modals, especially modals expressing desire, obligation and ability (Ullan, 1978:114ff).
- b. movement verbs such as 'come' and 'go' (Givon, 1973)
- c. aspect markers (Bybee, Pagliuca and Perkins 1994:422-27)

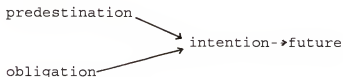
4.2.3 Pathways to FUTURE from 'agent-oriented modalities'

a. Desire

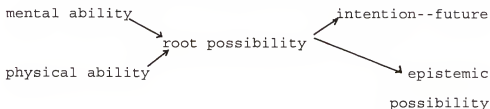
desire-→willingness-→intention-→prediction

(Bybee, Pagliuca and Perkins 1994:392)

b. Obligation:



(Bybee, Pagliuca and Perkins 1994:403)



(Bybee, Pagliuca and Perkins 1994:406-7)

4.2.4 Some constraints

- a. Each future gram may only have one agent-oriented meaning and no one future gram has more than one agent-oriented sense (Bybee, Pagliuca and Perkins 1991:25).
- b. Futures that have not undergone a lot of formal grammaticalization can have an imperative function. They are younger than average (Bybee, Pagliuca and Perkins 1994:419, Bybee, Paliuca and Perkins 1991).
- c. Among future precursors, only ability grams can develop epistemic possibility readings (Bybee, Pagliuca and Perkins 1994:).

4.3 The Nature of FUTURE

The central functions of future grams are intention and prediction. Future is less a temporal category and more a category resembling agent-oriented and epistemic modality, with important temporal implications.

4.4 Some Previous Studies on Chinese Futurity

4.4.1 Li Jinxi (1932)

Li (1932) is a description of Chinese future marker *jiang*. The study traces the historical change of the word from a verb through auxiliary to an adverb expressing future. He notices that as an adverb *jinag* can also express possibility and implies that this function is the extension of futurity. Though he never uses the term 'unidirection', Li points out that the process is not reversible ('dou shi qianjing er bu hou tui de.' Li 1932:90).

4.4.2 Tang Tingchi (1979)

Tang (1979) is a synchronic description of Chinese auxiliary *hui*. He points out that *hui* has two readings, one is ability, the other is prediction. The paper describes the structural distribution of these two uses. Some interesting facts are highlighted: a. Prediction *hui* can have both animate and inanimate nouns as its subjects, ability *hui* can only have animate nouns. b. When words 'lai' and 'qu' express state or direction, they can only appear with prediction *hui* in the same sentence. e.g.

(12)a. Ta hui kai che.

he HUI drive car

"He knows how to drive."

b. Ta hui kai che lai.

he HUI drive car come

"He will drive over."

(Tang 1979:4)

c. Predictive *hui* can appear either before another auxiliary or after it. Ability *hui* can only appear after another auxiliary. d. predictive *hui* is an 'intransitive auxiliary' and ability *hui* is a 'transitive auxiliary'.

4.4.3 Li and Thompson (1981)

In their reference grammar of Chinese, Li and Thompson argue that *hui* is an auxiliary, but *yao* is not, because *yao* has an 'immediate future' reading only in a declarative sentence. In A-not-A questions, in an abbreviated sentence or in a negative sentence, it only functions as a verb which means 'want', e.g.

(10) Wo yao xizao.

I want bathe

"I want/am going to bathe."

(14) Ni yao bu yao xizao?

you want not want bathe

"Do you want to bathe?"

(16) Wo bu yao xizao!

I not want bathe

"I don't want to bathe."

(Li and Thompson 1981:174-76)

4.4.4 Tsang (1981)

Tsang (1981) is a semantics study of modal auxiliary verbs in Chinese. He claims that due to the bivalent nature of the grammatical concept, future may be considered modal or temporal, depending on one's theoretical position. The modal/future inter-relatedness which stems basically from our understanding of future is reflected in the diachronic transformation of linguistic items from more modal to more future, resulting in the synchronic bivalent status of the modal/future categories in languages. In contemporary Chinese, *hui* and *yao* are more like future markers. Other possible future markers are motion verbs *lai* and *qu*. e.g.

5.11 a. Wo lai xiangxiang.

I come think ASP.

"I'll think about it."

- b. Women kaolūkaolū gu.
 we consider ASP go
 "We'll think about it."

(Tsang 1981:135)

Though some of his examples are questionable (See 5.11b), Tsang's approach is promising.

4.4.5 Smith (1990)

Smith (1990) is a quantitative study of future marking in mandarin Chinese. Some of her findings are given here:

- a. Hui is associated with positive evaluation, with cooperative meaning, with uncontrolled future where there is no specific reason, with vague future time reference.
- b. Yao is associated with unilateral meaning, with a more specific reason for making the prediction, with specific future time reference.

Smith notices that the retention of lexical meanings plays a role in the association between hui and positive evaluations.

4.4.6 Sanders (1992)

Sanders (1992) conducts a contrastive study on the expression of modality in Peking and Taipei Mandarin. He notices some interesting differences:

- a. Taipei speakers are much more likely to employ specific lexical items, e.g yao and hui, to indicate desire than are Peking speakers. For Peking speakers, the existence of 'desire' is inferred. Likewise, the semantic range of both yao and hui incorporate many more senses in Taiwan Mandarin than in Peking

Mandarin. In Taipei, yao clearly contains both a sense of 'must' and 'prohibition'. In Peking it is also possible to use yao in this way, though 'must' and 'prohibition' are usually expressed instead by *dei* and '*bie*', respectively. In the expression of 'ability', Taipei speakers show a strong tendency to select *hui*, while Peking speakers show an even stronger tendency to utilize *neng*.

4.4.7 Liu (1992)

Liu (1992) is a historical study on the expression of tense during Wei, Jin, South-North Dynasties (220-589 A.D.). He suggests that during this period of time a new future marker *yu* was developed. It coexisted with old future marker *jiang* and sometimes combined with *jiang*. Its 'grammaticalization' went through a process:

verb-->desire/future-->future e.g.:

- (1) Qi fu ba dao da huan, yu zhu zhi.
her husband take knife big shout want chase them
"Her husband holds his knife in hand and yells, he
wants to/will chase after them."

<Soushenji> (263-420 A.D.)

- (2) Shi tianzi jiangyu shi wei.
this emperor will lose seat
"This emperor will lose his authority."

<Soushenji> (263-420 A.D.)

- (3) Wu chang huan chi, yaodong yu luo.
I once suffer teeth shake will lose

"I had dental problems; some teeth were loose and going to come out."

<Yanshijianxun> (479-557 A.D.)

Liu notices that when subjects are inanimate nouns, *yu* becomes a full-fledged temporal adverb.

These previous studies provide invaluable linguistic facts, but a common defect is their explanatory power. The reason is obvious, they are limited either to a solely synchronic or diachronic description. Tsang tries to use diachronic evidence to explain synchronic linguistic phenomena, but his theoretical weapon is not sharp enough.

4.5 A Synchronic Description from the Grammaticalization Perspective

4.5.1 Data From Wang Meng's short story *Sheng de Hu*
(Deep Lake) 1989

4.5.2 A quantitative report

a. *Hui*

Total appearances: 31

As Verb: 1

As Ability: 11

As Future/prediction: 8

As Possibility: 6

As Bound element in nouns: 5

Examples:

Verb: Wo bu hui renhe yi zhong yueqi.

I NEG can any one kind instrument

"I don't know how to play any instrument."

Ability: Ta hui yong dianzijisuanji zuoqu.
 she can use computer compose-music
 "She can use computer to compose music."

Future: Shu du duo le hui bian chun.
 book read many LE will become foolish
 "(If anybody) reads too many books, (he) will
 become pedantic."

Possibility:

Baba zenmo hui conglai meiyou dui wo jiang
 Dad how possibly never NEG to I talk
 guo zhexie huar ne?
 ASP these painting PRT
 "How is it possible that Dad never told me about
 these paintings?"

In nouns: lianheguo anquan lishihui
 United Nations security council
 "UN security council"

It is here in the compound noun lishihui of the last example that the original meaning of *hui* has its trace, i.e. 'to meet', 'to get together.'

If we put these variations in a grammaticalization chain, according their degrees of grammaticalization, we get:

hui: verb/noun -->ability-->possibility-->future

b. Yao:

Total appearances: 34

As Verb: 6

As Desire: 10

As Obligation: 4

As Future: 14

Examples:

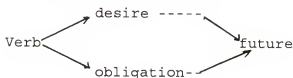
Verb: Wo yao le yi wan guamian.
I want ASP one bowl vermicelli
"I ordered one bowl of vermicelli."

Desire: Wo yao huiqu kankan.
I want return see ASP
"I want to go back and take a look."

Obligation:
Xuanze nüpengyou yao shenzhong.
choose girlfriend must careful
"When choosing a girlfriend one must be careful."

Future: Shitang de mifan piao yao zuofei
dining hall POSS rice ticket will expire
"The dining hall rice ticket will expire."

A grammaticalization chain for yao at this stage:



c. Neng:

Total appearances: 19

As Ability: 3

As Root possibility: 4

As Prohibition: 1

As Epistemic possibility: 11

Examples:

Coverb:

Zuihou, mama zhihao chengren yinjing jiang ta chuli.
 finally Mom have to admit already take it dispose
 "Finally, Mom has to admit that she already disposed
 of it."

This use of *jiang* provides a clue to its original verb use.

Immediate future:

Women de baba jiang bei chaoliu chaoyue.
 our POSS dad soon PASS trend surpass
 "Our fathers will be surpassed by the trends soon."

Future:

Ni zhong jiang dedao zhe ge ye gu-niang de
 you finally will get this CL wild girl POSS
 aiqing.
 love

"Eventually, You will capture this wild girl's heart."

A grammaticalization chain for *jiang* at this stage:

Verb/coverb-->immediate future-->future

As we pointed out earlier, grammaticalization chains have both the synchronic and diachronic dimensions; they describe both synchronic variations and historical changes of one linguistic entity. Actually there is no way to propose any of the chains purely from the synchronic facts. One has to have some historical knowledge of the language to do so. Therefore, these chains proposed by us from a synchronic point of view have to be tested and improved by diachronic studies. The next section is such a test.

4.6 A Diachronic Description

4.6.1 Jiang

a. Etymology: to take sacrifices to God or ancestors e.g.

Huo si huó jiāng, zhū jī yú bèng.

CONJ display CONJ take commemorate at door

"(People) display and pay (sacrifices) to commemorate
(ancestors) at the door of the <Shāngjīng" (6th Century B.C.)>

b. Uses as verb: to take, to go, to lead, to demand etc.e.g.

Guó gōng Línfǔ jiāng yǒu jūn, Zhōu gōng Heibian jiāng
Guo king NAME lead right troop Zhou king NAME lead
zuǒ jūn.

left troop

"The king of Guo Línfǔ leads the troop on the right, the
king of Zhōu Heibian leads the troop on the left."

<Zuozhuan (770-400 B.C.)>

c. Desire/intention: want to, e.g.

Wú jiāng shì yì.

I want run for office PRT.

"I want to run for office."

<Analects (551-479 B.C.)>

d. Immediate future: will, e.g.

Lè yì wǎng yǒu, bù zhī lǎo zhī jiāng zhī
happy CONJ forget worry NEG know old NOM will come
yǒu.

PRT

"(He is) so happy that he always forgets all his
worries and does not realize that he will become old
soon."

<Analects> (551-479 B.C.)

e. Future: will, e.g.

(Wáng) hòu jiāng huì zhī wú jī
king later will regret it NEG reach

"It will be too late for the king to regret."

<Shiji> (206 B.C.-8 A.D.)

f. A revised grammaticalization chain for jiāng:

verb-→desire-→intention-→immediate future-→future

4.6.2 Hui

- a. Etymology: to meet, e.g.

Gong hui Qi hou yu Ai.

king meet Qi king at Ai

"The King met the Duke of Qi at Ai."

<Zuozhuan (770-480 B.C.)>

- b. To understand, understanding, e.g.

Qi zhi sheng ze qi hui yuan.

his intelligence deep then his understanding remote

"His intelligence is profound, thus his understanding is far beyond (ours)."

<Hanfeizi (480-256 B.C.)>

- c. Mental ability: know how to do, can, e.g.

Shi tan zhi yi sheng yun, hui mo? yun bu hui.

monk snap finger one sound say can PRT say NEG can

"The monk snapped his fingers and asked 'Can you do it', he said 'I can't.'"

<Jindechuandenglu (960-1729 A.D.)>

- d. Weak obligation: should, ought to, e.g.

Rensheng zai shi hui dang you ye.

live in world should have career

"Living in this world, (one) should have a career."

<Yanshijiaxun (220-589 A.D.)>

- e. Future: will, e.g.

Tian di bu de bu huai, ze hui gui yu

sky earth NEG must NEG collapse then will return to

huai.

collapse

"That the subjects restrain their monarch is called
'yao'."

<Gongyangzhuan (480 B.C.-200 A.D.)>

(b) Jin zhi ren xiou qi tian jue yi
today POSS people sacrifice POSS heaven/nature for
yao ren jue.
demand social status

"These days, people sacrifice to God and nature and
demand benefits in terms of social status."

<Mencius (470-391 B.C.)>

(c) Rujin zhi yao du yin chui.
now only want belly full hang

"Now, (we) only want a satisfied, rounded belly."

<Tangbianwen (750-907 A.D.)>

c. Desire: want to, e.g.

yao wen miao fa yi neng jian.
want listen wonderful doctrine will can firm
"(We) want to listen to the wonderful doctrine in
order to have an unyielding will."

<Tangbianwen (750-907 A.D.)>

d. Obligation: should, have to, must, e.g.

Wen jing qie yao sheng gongjing.
listen doctrine definitely have to create respect
"(You) have to listen to the doctrine with respect."

<Tangbianwen (756-907 A.D.)>

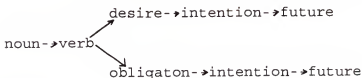
e. Future: will, e.g.

Xiongdi ruo xian, bian yao sheng bing.
brother if leisure then will get sick

"If I have nothing to do, I'll get sick"

<Shuihuzhuan (1368-1644 A.D.)>

f. A revised grammaticalization chain for yao:



4.6.4 Neng

a. Etymology: polar bear who has the specil ability to live
in very cold areas, e.g.

Jing meng huang neng ru yu qin men.

today dream yellow NENG enter from sleep door

"Today, I dreamed that a yellow polar bear came in my
bedroom door."

<Guoyu (770-256 B.C.)>

b. Ability: be able to, afford, e.g.

Fu he zhuhou, fei wu suo neng ye.

ASP unite duke not I what can PAT.

"Uniting those dukes is not something I can do."

<Zuozhuan (770-480 B.C.)>

c. Prohibition: e.g.

Chen bu neng shi fa, xia zhi yi

subjects not NENG violate law subjects POSS justice
ye.

PRT

"The subjects are not allowed to violate laws, this is
their justice."

<Hanshiwaizhuan (200-100 B.C.)>

d. Possibility: e.g.

Juanjuan bu jue, neng cheng jianghe.

tiny not run out NENG become river

"If the tiny stream keeps running, it may become a river."

<Caopian, Liu Zisheng (220-500 A.D.)>

e. A revised grammaticalization chain for *neng*:

noun---ability---root possibility---epistemic possibility
permission/prohibition

4.7 Discussion

The stage of 'intention' is very crucial for the development of future. *Neng* does not have this stage, therefore it could not develop a future meaning. The reason is that knowledge and ability are potential and pre-performative values. They need the help from speech acts such as request, warning, promising to gain positive and performative values which lead them to intention and post-performative value, i.e. future (Conradie 1987; Arnovich, 1990). Mental ability is more positive than physical ability, because 'learning' activities are subjective efforts which imply an intention to use learned knowledge. Bybee, Pagliuca, and Perkins claim that both physical and mental ability can develop future, this statement is not justified in Chinese.

Using grammaticalization degree and some principles of grammaticalization such as persistence and layering, most questions raised in previous studies on Chinese future can be better answered.

Tang (1979) wonders why only predictive *hui* can have both animate and inanimate subjects, but ability *hui* is limited to an animate subject. The answer lies in the fact that ability *hui* is an agent-oriented auxiliary which has a lower degree of grammaticalization, namely a more specific, restricted semantic range of domain and syntactic selection. Its semantic meaning can be illustrated as follows: Enabling condition exists in the agent and therefore its syntactic selection is restricted to an animate subject. Predictive *hui*, on the other hand, has a much higher degree of grammaticalization and consequently has a more general semantic meaning and more freedom of syntactic selection. As a matter of fact, lifting the restriction on an animate subject is a very crucial prerequisite for the development of epistemic modal meaning.

Most differences in using modal auxiliaries between Mandarin speakers in Taiwan and mainland China (Sanders, 1992) can be well explained in terms of degree of grammaticalization. In general, Taiwanese Mandarin speakers are more mostly influenced by southern dialects, are more conservative and they are not ready to use specialized auxiliaries such as *neng*, *dei* and *bie*, because specialization is the late stage of grammaticalization within a language due to the interaction between layers.

Using degree of grammaticalization as a measure, we can avoid the difficulty Li and Thompson (1981) had in distinguishing between verb, auxiliary and adverb. It is just a matter of degree of grammaticalization. Thus *yao* is highly

qualified as a auxiliary and *jiang* will not be denied as a future marker because of its adverbial function.

Language is a creative activity, not a fixed, self-contained system. Some linguistic facts such as layering and the fuzzy boundaries between categories demand extra-linguistic explanations. Factors such as cognitive force, pragmatics and history must be considered.

4.8 Conclusion

Some conclusions can be drawn from the discussion in this chapter. They are as follows: Modern Chinese has three, not two, future markers: *jiang*, *hui*, and *yao*. They are layers in future domain. A linguistic cycle occurred in the history of Chinese: *yu*-->*yao*.

Jiang, *hui* and *yao* reflect different degrees of grammaticalization. This difference is realized in word order in which the future marker that has higher degree of grammaticalization preceeds the one which has lower degree of grammaticalization.

The grammaticalization of Chinese future markers confirms an universal path: verb--> agent-oriented modality--> intention--> future.

Movement verbs 'go' and 'come' are not yet qualified candidates for future in present Chinese. Clearly, simple movement verbs provide insufficient ground for a future marker. They have to be goal-oriented in order to have a possible stage of intention. But in classic Chinese there was a future marker *xing* whose original meaning was "to go" or "to walk":

Zi ci er xi ping xing zhi Wancheng.

from here CONJ west straight GO to Wancheng.

"From here go straight west to Wancheng."

<Hanshu (206 B.C.-8 A.D.)>

Axuan xing zhixue, er bu ai wen shu.

Axuan WILL fifteen CONJ not love culture skill

"Axuan will be fifteen years old, but (he) dose not like to study cultural knowledge."

<Zezi, Tao Yuan-Ming (265-420 A.D.)>

Sometimes, *xing* could appear with another future marker *jiang*:

Xing jiang wei ren suo bing.

will PASS people PART eliminate

"(We) will be eliminated by other people."

Due to its lexical meaning, *neng* has no future reading.

An auxiliary expressing desire such as *xiang*, may eventually emerge as a future mark.

CHAPTER 5 SUMMARY AND CONCLUSIONS

5.1 Summary

In previous chapters, we have examined Chinese conjunctive adverbs in both synchronic and diachronic perspectives.

Synchronically, we described Chinese adverbs' conjunctive functions in a discourse-oriented approach. Unlike most previous studies on the subject, which treated the phenomenon as a syntactic issue, we put Chinese adverbs in a larger picture, namely, in discourse.

First, we adopted RTS developed by Mann and Thompson (1987b and 1988), which focus on the rhetorical relations between clauses. Since our intention is to reveal the conjunctive functions of Chinese adverbs, RTS serves this purpose very well. For instance, it is very difficult to see that you has the function of expressing "accumulation of events" at the syntactic level. But in a diagram of RTS, this function can be clearly seen.

Second, we consider the grammaticalization of Chinese adverbs as an on-going process that is driven by speakers' communicative strategies. In order to see how these communicative strategies have motivated the conjunctive usages of Chinese adverbs, we conducted an extensive conversational analysis in Chapter Two. It was shown that the conjunctive usages of Chinese adverbs are closely linked to certain specific sentence patterns, such as

rhetoical questions, which serve as very specific communicative strategies.

Based on an assumption that synchronically related senses are also diachronically related, after revealing all the senses each Chinese adverb as in the contemporary Chinese, we arranged these different senses, according to their semantic relatedness, along a hypothesized grammaticalization path. This kind of path implies that one adverb's different senses in contemporary Chinese are, in fact, the traces of its historical development at different stages. This assumption certainly needs to be proven by historical evidence. Chapter Three offers such proof.

In Chapter Three, we did not simply examine Chinese adverbs' historical development, but also focused on the main processes of their grammaticalization, such as verb serialization and reanalysis, analogy, discourse manipulation, rhetorical structural strengthening, etc. It was found that the words which had motion verbs as their main source meanings, such as *jiu* and *hai*, always started their grammaticalization through verb serialization and reanalysis; and the words which had nominals as their source meanings are more likely to have started their grammaticalization through analogy, such as in the case of *you* and *ye*. It was also found that the rhetorical structure of Chinese is highly iconic, which in turn made Chinese adverbs' conjunctive functions much more prominent than their counterparts in English. This is because the typical discourse in which adverbs gained their conjunctive functions is a narrative discourse in which iconicity is highly respected.

In Chapter Four, we provided more evidence of grammaticalization in Chinese by analyzing the evolution of futurity markers in Chinese. There, some typical grammaticalization processes, such as verb serialization and reanalysis, can be seen as well. It was further found that both the source meaning and the grammaticalization paths of futurity markers are cross-linguistically applicable.

Based on these findings, we will try to answer the issues we raised in Chapter one.

5.2 CONCLUSIONS

In demonstrating the process of the grammaticalization of Chinese conjunctive adverbs and futurity makers, we have characterized the interrelation between synchronic and diachronic descriptions of grammar, between grammar and cognitive factors (such as iconicity) and between grammar and discourse pragmatics (such as conversational strategies). Though this study is limited to conjunctive adverbs and auxiliaries, it bears on some important theoretical issues. In this section, we will briefly readdress the issues and highlight the results of this study.

5.2.1 Diachronic study and synchronic description

The objective of structural linguistics is mainly synchronic investigation. A language's diachronic facts are considered irrelevant to its native speaker's knowledge of the language (Chomsky, 1968). One of the consequences of this approach is that the different functions of one linguistic form are treated as separate entities. The relations between them are left without explanation. For example, the Chinese words *jiu*, *hai*, *cai* each have more than one function or meaning. The mainstream studies of

Chinese grammar have not provided a satisfactory explanation as to why and how these words have so many different meanings/functions and what kind of relations there are between them.

As Jespersen points out, a grammar should be both descriptive and explanatory. In order to be so, diachronic facts must be considered. Combining both synchronic and diachronic approaches, grammaticalization studies provide not only a more accurate description, but also a sufficient explanation. As Traugott (1965) and Lehmann (1984) put it: The synchronic variations of one linguistic form are its historical changes at different stages of grammaticalization. In the forms of grammaticalization chains we proposed in Chapters Two and Three, the Chinese conjunctive adverbs' synchronic variations and the relations between them are clearly presented.

5.2.2 Grammar and discourse

As pointed out in previous chapters, a full understanding of the grammar of Chinese adverbs requires considerations of discourse functions in a communicative situation. For example, if we do not take participants' expectation into consideration, we would not be able to grasp the modal meanings of the Chinese conjunctive adverbs. Moreover, the preferences for, or restrictions on, the occurrence of Chinese conjunctive adverbs with other linguistic elements and forms such as sentence-final particles, rhetorical questions, and sentence-denying depend largely on their functional compatibility. These observations suggest that discourse functions are often incorporated into, and to a certain extent determine, the grammatical structure in which

they occur. Syntax is not autonomous or independent of semantics, pragmatics, and human cognition.

5.2.3 discourse and grammaticalization

Observation of the interaction between use and meaning has increasingly drawn attention to the significant role of the discourse/pragmatic context in grammaticalization. In Givón (1979), the term 'syntacticization' is used to describe the process whereby a pragmatic pattern/mode enters into the syntactic pattern/mode.

DuBois (1988:1) makes even more explicit the importance of studying discourse in understanding the grammar-building process: "Discourse reveals a kind of fluid patterning, which apparently can effectively shape the (relatively rigidified) pattern of grammar."

Hopper (1987:142) simply suggests that grammar emerges from discourse: "Structure, or regularity, comes out of discourse and is shaped by discourse as much as it shapes discourse in an on-going process."

With the discussion in Chapter 3, this work provides a valuable illustration as to exactly how the discourse patterning comes into play in the grammatical shift from the serial verbs *jiu* and *hai* to the non-verbal *jiu* and *hai*. It shows that the recurrent discourse pattern of narrative sequencing with the serial-verb uses of *jiu* and *hai* motivates the reinterpretation of the two words from verbs signaling a consequent action/event to a grammatical marker of the consequents themselves. The discourse patterning of an antecedent-consequent sequence with *jiu/hai* in narrative eventually gives rise to the new grammatical functions.

5.2.4 Grammaticalization and analogy

Traditionally, linguists distinguish the process of grammaticalization from analogy (Meillet, 1948). But this study has shown that there frequently is an overlap between the two of them. A lexical item may undergo grammaticalization due to its source meaning and discourse environment, such as *jiu* and *hai*, or due to its phonetic similarity with existing grammatical forms, such as *cai*, *you*, and *ye*. Once a lexical item obtains a certain 'source meaning' by analogy, it will become grammaticalized along a similar path with the items that have the appropriate source meaning themselves.

5.2.5 Universal paths and language-specific meanings

Bybee suggests that the lexical items that have similar source meanings in different languages will have similar paths of grammaticalization, which she calls "universal paths." Yet she cautions that it is not the source meaning that gives a unique grammatical meaning, but rather that the source meaning uniquely determines the grammaticalization path the gram will travel along in its semantic development. What determines the grammatical meaning is the entire source construction, not simply the lexical meaning of the stem (Bybee, 1994). This study has found that most grammaticalization paths proposed by Bybee are indeed applicable to Chinese, but the specific grammatical meanings for the grams that have similar source constructions may differ from language to language. A striking example is the Chinese *hui* and the English *can*. Both of them have similar source meanings and even similar source constructions. Although they have quite similar paths of grammaticalization, the grammatical meanings they

acquire along the path are different. A possible reason is the interaction between different grammatical forms in each language.

5.2.6 Iconicity and rhetorical structure

This study has shown that iconicity as a basic human cognitive principle, may be recognized at different linguistic levels, syntactic or pragmatic. Though both Chinese and English recognize pragmatic iconicity by conjunctions, Chinese has a much higher degree of iconicity at both syntactic and rhetorical levels. This high degree of iconicity recognition is a cognitive motivation for the grammaticalization of Chinese conjunctive adverbs and their prominence over their English counterparts.

The dynamic interplay shown in this study between discourse/cognition and grammaticalization calls for a revision of the traditional view of grammar.

APPENDIX

CHINESE DYNASTIES AND HISTORICAL PERIODS A CHRONOLOGICAL TABLE

Xia	21st-18th centuries
B.C.	
Shang (Yin)	1765-1122 B.C.
Western Zhou	1122 or 1027-771
B.C.	
Eastern Zhou	770-403 B.C.
Spring and Autumn Period	722-481 B.C.
Warring States Period	403-221 B.C.
Qin	221-207 B.C.
Han	206 B.C.-A.D. 220
West Han	206 B.C.-A.D. 24
East Han	A.D. 25-220
Three Kingdoms Period	220-280
Wei	220-265
Shu-Han	221-263
Wu	222-280
Jin (Chin)	265-420
Western Jin	265-316
Eastern Jin	317-420
Northern and Southern Dynasties	420-589
Song (Liu-Song)	420-479
Qi (Southern Qi)	479-502
Liang	502-557
Chen	557-589
Northern Wei	386-534
Eastern Wei	534-550
Northern Qi	550-577
Northern Zhou	557-581
Sui	618-907
Tang	618-907
Five Dynasties Period	907-960
Southern Tang	937-975
Song	960-1279
Northern Song	960-1127
Southern Song	1127-1279
Liao (Khitans)	916-1125
Xixia (Tanguts)	1038-1227
Jin (Jurchens)	1115-1234
Yuan (Mongols)	1234-1368
Ming	1368-1644
Qing (Manchu)	1644-1911
Republic	1912-
People's Republic	1949-

REFERENCES

- Abraham, W. 1991. The grammaticalization of the German modal particles. In Traugott and Heine, ed. vol 2:331-381.
- Arnovich, Leslie K. 1990. The development of Future constructions in English: The pragmatics of modal and temporal *will* and *shall* in Middle English. *Berkeley Insight in Linguistics*.
- Baxter, William H. 1992. *A Handbook of Old Chinese Phonology* Berlin: Mouton de Gruyter.
- Beida, Department of Chinese, Classes of 1955 & 1957. 1982. Examples and Explanations for Empty words in Modern Mandarin in Beijing: Commercial Press.
- Benveniste, Emile. 1968. Mutations of linguistic categories. In Lehmann and Malkiel, eds., 85-94.
- Big, Yung-O. 1984. The semantics and pragmatics of *cai* and *jiu* in Mandarin Chinese. Cornell University Ph.D. dissertation. [Reprinted, Bloomington: Indiana University Linguistics Club, 1987.]
- 1988a. From focus in proposition to focus in speech situation: *cai* and *jiu* in Mandarin Chinese. JCL 16: 72-108.
- 1988b. From objectivity to subjectivity: The text-building function of *you* in Chinese. *Studies in Language* 12-1: 99-122.
1989. *Ye* as manifested on three discourse planes: polysemy or abstraction? In *Functionalism and Chinese grammar*. ed. By James H-Y Tai and Frank F. S. Hsueh. South Orange, NJ: CLTA.
- Bisang, Walter. 1993. Ms. *Adverbs and Auxiliaries from Verbs*. University of Mainz.
- Bolinger, Dwight. 1978. Intonation across languages. In Greenberg ed., vol. 2:471-524.
- Bybee, Joan L. 1985. *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam: Benjamins.
1988. Semantic substance vs. contrast in the development of grammatical meaning. BLS 14. Berkeley: University of California Press .

- Bybee, Joan L. and William Pagliuca. 1985. Cross-linguistic comparison and the development of grammatical meaning. In J. Fisiak, ed. Berlin:Mouton. 59-83.
1987. The evolution of future meaning. In Ramat, ed, 109-22.
- Bybee, Joan L., Revere Perkins and William Pagliuca. 1991. Back to future. In Traugott and Heine, ed, vol 2:17-58.
1994. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages in the world*. Chicago: The University of Chicago Press.
- Cao, Guangshun. 1987. Shi shuo jiu he kuai zai Song dai de shiyong ji youguan de duandai wenti (A study on the use of jiu and kuai in Song dynasty and the date of texts). *Zhongguo Yuwen (Chinese Language and Literature)* 4:288-94.
- Chafe, Wallace. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Charles Li, ed., *Subject and Topic*. New York: Academic Press.
- and Semantics, vol 2. New York: Peter Lang.
- Chao, Yuen Ren. 1968. *A Grammar of Spoken Chinese*. Berkeley: University of California Press.
- Cheng, Robert. 1983. Guanhua yu Taiyu zhong jiu he cai zhijian de luoji guanxi (The logical relation expressed by jiu and cai in Mandarin and Taiwanese). *Taiwan Fengwu*. 34: 122-96.
- Cheng, Mei-ling. 1993. *Ye, You, and Hai as Connectives in Chinese Narrative Discourse*. M.A. Thesis. Taiwan. National Chengchi University.
- Chomsky, Norm. 1968. *Language and Mind*. New York: Harcourt, Brace & World.
- Chu, Chauncey C. 1991. Hanyu fuci de pianzhang gongneng (The discourse function of Mandarin adverbs). *Yuyan Jiaoxue yu Yanjiu (Language Teaching and Linguistics)*, 2:64-78.
1994. Ms. *A Discourse Grammar of Mandarin Chinese*. University of Florida.
- Claudi, Ulrike, and Bernd Heine. 1986. On the metaphorical base of grammar. *Studies in Languages* 10, no. 2:297-335.
- Coates, Jennifer. 1983. *The Semantics of the Modal Auxiliaries*. London & Canberra: Croom Helm.
- Comrie, B. 1985. *Tense*. Cambridge: Cambridge University Press.
- Condillac, E. B. de. 1746. *Essai sur l'origine des connaissances humaines*. Paris.
- Conradie, C.J. 1987. Semantic change in modal auxiliaries as a result of speech act embedding. In Harris and Ramat, ed. 171-80.

- Croft, William. 1990. *Typology and Universals*. Cambridge: Cambridge University Press.
- Coates, J. 1983. *The Semantics of the Modal Auxiliaries*. London: Croom Helm.
- Ernst, Thomas. 1994. Functional categories and the Chinese Infl. *Linguistics* 32:191-212.
- Fisiak, J. ed. 1985. *Historical Semantic, Historical Word Formation*. Berlin: Mouton.
- Fleischman, S. 1982. *The Future in Thought and Language*. Cambridge: Cambridge University Press.
- Ford, Cecilia E. and Sandra A. Thompson 1986. Conditionals in discourse: A text-based study from English. In Traugott, ed.
- Gabelentz, G von der. 1891 (1901). *Die Sprachwissenschaft: Ihre Aufgaben, Methoden und bisherigen Ergebnisse*. 2nd ed. Leipzig: Weigel Nachf.
- Givon, Talmy. 1971a. Dependent modals, performatives, factivity, Bantu subjunctives and what not. *Studies in African Linguistics* 2, no. 1:61-81.
- 1971b. Historical syntax and synchronic morphology: An archaeologist's field trip. *CLS* 7: 394-415
- 1971c. On the verbal origin of Bantu verb suffixes. *Studies in African Linguistics* 2, no. 2:145-63.
1973. The time phenomenon. *Language*. 49:890-925.
1979. *On Understanding Grammar*. New York: Academic.
- 1979a. From discourse to syntax : grammar as a processing strategy. In Givon ed., *Syntax and Semantics*. Vol. 12: Discourse and syntax. New York: Academic Press. 81-112.
1983. ed. *Topic Continuity in Discourse: A Quantitative Cross-Linguistic Study*. Amsterdam: John Benjamins.
1984. *Syntax. A functional-Typological Introduction*. Vol 1. New York: Academic Press
1985. Iconicity, isomorphism and non-arbitrary coding in syntax. In J. Haiman, ed. 187-220
1990. *Syntax. A Functional-Typological Introduction*. Vol 2. New York: Academic Press.
- 1991a. Some substantive issues concerning verb serialization: Grammatical vs. cognitive packaging. In Lefebvre, ed., 137-183.
- 1991b. Markedness in grammar: distributional, communicative and cognitive correlates of syntactic structure. *Studies in Language*. 15-2:335-370.
- Greenberg, Joseph H. 1978 ed., *Universals of human language*. 4 vols. Stanford: Stanford University Press.
- Grice, H. Paul. 1975. Logic and conversation. *Syntax and Semantics 3: Speech Acts*. ed. by Cole, P. and J. Morgan, 41-85. New York: Academic Press.

- Grimes, Joseph. 1975. *The Thread of Discourse*. Paris: Mouton.
- Guo, Moruo. 1964? *Jiaguwen Yanjiu* (A study on oracle inscriptions). Beijing: Science Press.
- Guo, Zhi-liang. 1990. Biaoshi cunzai mouzhong kenengxing de 'neng' he 'keyi' (On neng and keyi which express existing possibilities). In *A Selection of Papers Presented at Third International Conference on Teaching Chinese as a Foreign Language*. Beijing: Beijing Language Institute Press.
- Haiman, John. 1978. Conditionals are topics. *Language* 54: 565-589
1980. The iconicity of grammar : isomorphism and motivation. *Language*. 56: 515-540
1985a. ed. *Iconicity in Syntax*. Amsterdam: Benjamins.
1985b. *Natural Syntax : Iconicity and Erosion*. Cambridge: Cambridge University Press.
- Haiman, John and Sandra A. Thompson. 1984. "Subordination" in universal grammar. *Berkeley Linguistics Society*. 10: 510-23.
1988. eds., *Clause Combining in Grammar and Discourse*. Amsterdam: Benjamins
- Harris, M. and Ramat, P. ed. 1987. *Historical Development of Auxiliaries*. Berlin: Mouton.
- Hawkins, John. 1988. *Explanations for Language Universals*. Oxford: Basil Blackwell.
- Heine, Bernd. 1992. Grammaticalization chains". *Studies in Languages* 16, 2:335-68.
1993. *Auxiliaries: Cognitive Forces and Grammaticalization*. Oxford: Oxford University Press
- Heine, Bernd and Mechthild Reh. 1984. *Grammaticalization and Reanalysis in African Languages*. Hamburg: Helmut Buske.
- Heine, Bernd and Ulrike Claudi. 1986. The metaphorical base of grammatical categories in Ewe." In Fishman. *The Fergusonian Impact*. Vol 1, *From Phonology to Society*. Berlin: Mouton de Gruyter.
- Heine, Bernd, Ulrike Claudi and Friederike Hünemeyer. 1991a *Grammaticalization: A Conceptual Framework*. Chicago: The University of Chicago Press.
1991b. From Cognition to grammar--evidence from African languages. In Traugott and Heine, eds., Vol. 1, 149-87.
- Hodge, Carleton T. 1970. The linguistic cycle. *Language Sciences* 13: 1-7.
- Hopper, Paul. 1987. Emergent grammar. *Berkeley Linguistic Society* 13: 139-57.
1989? Emergent grammar and the a priori grammar postulate. In 1991. "On some principles of grammaticalization." In Traugott and Heine, eds., Vol.1, 17-35.

- 1992a. A discourse perspective on syntactic change: Text-building strategies in Early Germanic. In Edgar Polome and Werner Winter, eds., *Reconstructing*. Berlin: Mouton de Gruyter.
- 1992b. Times of the sign: discourse, temporality, and recent linguistics. *Time and Society*. Vol. 1(2): 223-238.
- Hopper, Paul and Sandra Thompson. 1980. Transitivity in grammar and discourse. *Language*. 56: 251-99.
1984. The discourse basis for lexical categories in universal grammar. *Language*. 60: 703-52.
1991. Language universals, discourse pragmatics, and semantics. paper presented at Fourth Biennial Symposium on Linguistics and Semiotics. Rice University. April 16-19, 1991.
- Hopper, Paul and Elizabeth C. Traugott. 1993. *Grammaticalization*. Cambridge: Cambridge University Press.
- Humboldt, Wilhelm von. 1825. Über das Entstehen der grammatisch Formen und ihren Einfluss auf die Ideenentwicklung: Gelesen in der Academie der Wissenschaften am 17. Januar 1822. *Abhandlungen der Königlischen Akademie der Wissenschaften zu Berlin*, 401-30.
- Jakobson, Roman. 1959. Boas' view of grammatical meaning. In R. Jakobson, 1971. *Word and Language. Selected writings* Vol. 2. *The Hague/Paris: Mouton*. 489-496.
- Jespersen, Otto. 1922. *Language: Its Nature, Development, and Origin*. London: G. Allen & Unwin.
- 1924/1992. *The Philosophy of Grammar*. Chicago: The University of Chicago Press.
- 1933/1987. *Essentials of English Grammar*. Tuscaloosa & London: The University of Alabama Press.
- Kortmann, Bernd. 1994. *Adverbial Subordinators in the Languages of Europe: Towards a Typology and History*. EURO-TYP Programme in Language Typology European Science Foundation.
- König, Ekkehard. 1985a. On the history of concessive connectives in English. Diachronic and synchronic evidence. *Lingua* 66:1-19.
- 1985b. Where do concessives come from? On the development of concessive connectives. In J. Fisiak ed. *Historical Semantic--Historical Word-Formation*. Berlin: Mouton. 263-282.
1986. Conditionals, concessive conditionals and concessives: areas of contrast, overlap, and neutralization. In E. Traugott, ed, 229-246.
- 1991a. Concessive relations as the dual of causal relations. In Dietmar Zaefferer. ed. *Semantic Universals and Universal Semantic*. Berlin/New York: Foris. 190-209.
- 1991b. *The Meaning of Focus Particles: A Comparative Perspective*. London/New York: Routledge.

- Kurylowicz, Jerzy. 1964. *The Inflectional Categories of Indo-European*. Heidelberg: Winter.
- 1965/1975. The evolution of grammatical categories. In *Esquisses linguistiques II*, 38-54. Munich: Fink.
- Lakoff, George, and Mark Johnson. 1981. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Langacker, Ronald W. 1977. Syntactic reanalysis. In Li ed., 57-139.
1987. *Foundations of cognitive grammar*. Vol. 1. Stanford: Stanford University Press.
- Larson, Richard K. 1991. Some issues in verb serialization. In Lefebvre, ed., 185-211.
- Lefebvre, Claire. 1991. *Serial Verbs: Grammatical, Comparative and Cognitive Approaches*. Amsterdam. Benjamins.
- Lehmann, Christian. 1982. *Thoughts on Grammaticalization: A Programmatic Sketch*. Vol. I (Arbeiten des Kölner Universalien-Projekts 48). Köln: Universität zu Köln. Institut für Sprachwissenschaft.
1985. Grammaticalization: synchronic variation and diachronic change. *Lingua e Stile* 20:303-18.
1986. Grammaticalization and linguistic typology. *General Linguistics* 26, no. 1:3-23.
1987. Theoretical implications of processes of grammaticalization. Paper presented at The Conference on the Role of Theory in Language Description. Ocho Rios, Jamaica, 31 October-8 November
1988. Towards a typology of clause linkage. In Haiman and Thompson, eds., 181-225.
1989. Latin subordination in typological perspective. In Gualtierio Calboli, ed., *Subordination and Other Topics in Latin: Proceedings of the Third Colloquium on Latin Linguistics*. 153-79. Amsterdam: Benjamins.
1991. Grammaticalization and related changes in contemporary German. In E. C. Traugott and B. Heine. eds., Vol. II: 490-535.
- Lehmann, Winfried P. and Yakov Malkiel. eds., 1982. *Perspectives in historical linguistics*. Amsterdam: Benjamins.
- Levinson, Stephen C. 1983. *Pragmatics*. Cambridge: Cambridge University Press.
1987. Minimization and conversational inference. In J. Verschueren and M. Bertuccelli-Papi. eds., 61-129.
- Li, C. 1977. ed. *Mechanisms of syntactic change*. Austin: University of Texas.
- Li, C. and S. Thompson. 1976. Subject and topic: A new typology of languages. In Li ed., *Subject and Topic*. New York: Academic Press. 457-489.

1981. Mandarin Chinese: a functional reference grammar. Berkeley: University of California Press.
- Li, Hua-yuan. 1988. Meiguo xuesheng yu 'nengyuan dongci' (American students and optative verb). In A selection of papers presented at second international conference on teaching Chinese as a foreign language. Beijing: Beijing Language Institute Press.
- Li, Jinxi. 1932. Lun Jian (On Jian). In Li, 1957. *Hanyu Shici Lunwenji* (A collection of articles on semantics of Chinese words). Beijing: Science Publisher.
- Li, Yafei. On deriving serial verb constructions. In Fefebvre, ed., 103-135.
- Liu, Le-ning. 1994. The grammaticalization of futurity through modality in Chinese. Paper presented at Third international conference on Chinese linguistics. Hong Kong July 15.
- Liu, Le-ning and Chauncey C. Chu. 1993. Movable adverbs, conjunctions, and grammaticalization of conjunctive function. Paper presented at the annual meeting of Chinese Teachers Association of America. San Antonio, TX. November, 20-22.
- Liu, Mei-chun. 1993. *Discourse, Grammar, and Grammaticalization: Synchronic and Diachronic Analyses of Mandarin Adverbial Markers* Jiu and Cai. University of Colorado Ph.D. dissertation.
- Liu, Shizhen. 1992. Wei, Jin, Nan-Bei chao qijian de dongci shitai biao shifa (The expressions of tense during Wei, Jin and South-North dynasties). In Hu Zhu-an, Yang Naisi and Jian Shaoyu, ed., *Jindai Hanyu Yanjiu* (Studies on modern Chinese). Beijing: Commercial Publisher
- Lord, Carol. 1976. Evidence for syntactic reanalysis: From verb to complementizer in Kwa. In Steever, Walker, and Mufwene, eds., 179-91.
- Lu, Bingfu. 1984. Fuci jiu de chaxiang fenhe wenti. *Hanyu Xuexi* (Studies on Chinese), 1:31-34.
- Lu, Jian-ming and Ma Zhen. 1984. *Xiandai Hanyu Xuci Sanlun* (A general discussion on functional words of modern Chinese). Beijing: Beijing University Press.
- Lü, Xiang. 1977. *Zhongguo Wenfa Yaolüe*. (The essentials of Chinese grammar) Taipei: Sheng Wu.
- Lü, Shuxiang. 1980. *Xiandai Hanyu ba bai ci* (Eight hundred words in modern Chinese). Beijing: Commerce Press.

- Ma, Jianzhong. 1898/1983. *Mashi Wentong* (Ma's grammar). Beijing: Commerce Publisher
- Ma, Xin-hua, and Chang Jin-yu. 1980. Tan jiu. *Yuwen Jiaoxue yu Yanjiu* (Language teaching and Linguistics). 2:55-62.
- Mann, William C. and Sandra A. Thompson. 1987. *Rhetorical Structure Theory: A Theory of Text Organization*. Ms. Information Science Institute, University of Southern California.
- Matthiessen, Christian, and Sandra A. Thompson. 1988. The structure of discourse and "subordination". In Haiman and Thompson eds., 275-333.
- Mei, Tsu-lin. 1984. Cong yuyanshi kan jiben Yuan zaju binbai de xiezuo shiqi (On the date of some plays in Yuan dynasty from the point of view of language history). *Yuyanxue Luncong* (Journal of Linguistics). 13:111-51.
- Meillet, Antoine. 1912. L'évolution des formes grammaticales (The evolution of grammatical forms) *Scientia* 12. (Reprinted in A. Meillet, *Linguistique historique et linguistique generale*. 1:130-48. Paris: Edouard Champion, 1948.) 1915/16. Le renouvellement des conjonctions (The renewal of conjunctions). In Meillet, 1948:159-74.
- Newmeyer, F. J. 1984. Review of Lorraine Obler and Lise Menn, eds., *Exceptional language and linguistics*. *Language* 60, 4:969-975.
- Ota, Tatsuo. 1985. *Zhongguoyu Lishi Wenfa* (The historical grammar of Chinese). translated by Jiang, Shaoyu, and Xu Changhua. Beijing: Beijing University Press.
- Palmer, F. R. 1986. *Mood and Modality*. Cambridge: Cambridge University Press.
- Paris, Marie-Claude. 1987. A semantic analysis of jiu and cai in modern Chinese. *Zhongguo Yuwen* (Chinese Language and Literature). 5:390-98.
- Sanders, Robert M. 1992. The expression of modality in Peiking and Taipei Mandarin. *Journal of Chinese Linguistics* Vol 20. No.2:290-313.
- Sankoff, Gillian, and Penelope Brown. 1976. The origins of syntax in discourse: A case study of Tok Pisin relatives. *Language* 52: 631-66.
- Sapir, Edward. 1921. *Language: An introduction to the study of speech*. New York: Harcourt, Brace & World.
- Sasse, Hans-Jurgen. 1993. Syntactic categories and subcategories. In *Syntax: Handbucher zur Sprach-und*

Kommunikationswissenschaft. ed., J. Jacobs and Theo Vennemann. New York: Mouton.

- Saussure, Ferdinand de. 1916. *Cours de linguistique generale*. Paris: Payot.
1922/1986. *Course in General Linguistics*. Translated and annotated by Roy Harris. La Salle: Open Court Press.
- Schlesinger, I. M. 1979. Cognitive structure and semantic deep structure: The case of the instrumental. *Journal of Linguistics* 15:307-24.
- Shopen, Timothy. 1985. ed., *Language Typology and Syntactic Description*. Cambridge: Cambridge University Press, 3 vols.
- Sperber, Dan, and Deirdre Wilson. 1986. *Relevance, Communication and Cognition*. Cambridge: Cambridge University Press.
- Smith, Laura. 1990. A quantitative study of future marking in Mandarin Chinese. University of Michigan. Ms.
- Steever, S.B., C.A.Walker, and S.S.Mufwene. 1976. eds., *Paper From the Parasession on Diachronic Syntax*. Chicago: Chicago Linguistic Society. April 22.
- Sweetser, Eve Eliot. 1988. Grammaticalization and semantic bleaching. *Berkeley Linguistics Society* 14:389-405.
1990. *From Etymology to Pragmatics*. Metaphorical and cultural aspects of semantic structure. Cambridge: Cambridge University Press.
- Tai, James H-Y. 1985. Temporal sequence and Chinese word order. In *Iconicity in Syntax*. ed., by John Haiman, 49-72.
- Tang, Ting Chi. 1979. Zhudongci hui de liangzhong yongfa (Two uses of the auxiliary hui). In Tang, Guoyu Yufa Yanjiu Lunji (A collection of studies on Mandarin Grammar). Taipei: Students' Press.
- Tang, Ting-chi, Robert L. Cheng, and Li Ying-che. eds., *Studies in Chinese Syntax and Semantics*. Taipei: Student Book Co.
- Teng, Shou-hsin. 1983. Quantifier hierarchy in Chinese. In Tang, Cheng, and Li, eds., 241-251.
- Thompson, Sandra A. 1988. A discourse approach to the cross-linguistic category 'adjective'. In John Hawkins, ed., 167-185.
1990. Information flow and 'dative shift' in English. In Jerrold Edmondson, Catherine Feagin, and Peter Mühlhäusler, eds., *Development and Diversity: linguistic variation across time and space*. 239-54. Summer Institute of Linguistics and University of Texas at Arlington.

- Thompson, Sandra A. and Robert Langacre. 1985. Adverb clauses. In Shopen, ed., Vol.2, 171-234.
- Thompson, Sandra A. and Anthony Mulac. 1991. A quantitative perspective on the grammaticalization of epistemic parentheticals in English. In Traugott and Heine, eds., Vol. 2, 313-29.
- Thompson, Sandra A. and William C. Mann. 1986. A discourse view of concession in written English. In Scott DeLancey & Russell Tomlin eds., *Proceedings of the Second Annual Meeting of the Pacific Linguistics Conference*. Pacific Linguistics Conference, November 1986.
1987. Antithesis: A study in clause combining and discourse structure. In Ross Steele and Terry Threadgold eds., *Language Topics: Essays in Honor of M. A. K. Halliday*. Amsterdam: Benjamins.
- Tooke, J. Horne. 1786. In Harro Stammerjohann ed., *Handbuch der Linguistik. Allgemeine und angewandte Sprachwissenschaft*. München: Nymphenburg.
- Traugott, Elizabeth C. 1965. Diachronic syntax and general grammar. *Language* 41: 402-15.
1982. From propositional to textual and expressive meanings: Some semantic-pragmatic aspects of grammaticalization. In Lehmann and Malkiel eds. 245-71.
- 1986a. From polysemy to internal semantic reconstruction. *Berkeley Linguistics Society* 12:539:50.
1986. ed. *On conditionals*. Cambridge: Cambridge University Press.
1987. On the rise of epistemic meanings in English: A case in the regularity of semantic change. Stanford University, Linguistic Society of America paper. November,
1988. Pragmatic strengthening and grammaticalization. *Berkeley Linguistic Society*. 14:406-16.
1989. On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language*. 65:31-55.
- Traugott, Elizabeth C. and Bernd Heine, eds., 1991. *Approaches to grammaticalization*. 2 vols Amsterdam: Benjamins.
- Traugott, Elizabeth C. and Ekkehard König. 1991. The semantics-pragmatic of grammaticalization revisited. In Traugott and Heine eds., Vol 1.
- Tsang, Chui Lim. 1981. A semantic study of modal auxiliary verbs in Chinese. Stanford University Doctoral Dissertation.
- Tsao, Feng-fu. 1976. 'Expectation' in Chinese: a functional analysis of two adverbs. *Berkeley Linguistics Society* 2: 306-74.

- Tseng, David S. D. 1977. *A Study on Chinese Equivalents of the English 'and'*. M.A. Thesis, National Taiwan Normal University.
- Ullman, Russell. 1978. The nature of future tense. In Greenberger, ed., IV. *Word Structure*.
- Verschueren, Jef. and M. Bertuccelli-Papi. 1987. eds., *The Pragmatics Perspective. Selected Papers From the 1985 International Pragmatic Conference*. Amsterdam: Benjamins.
- Wang, Huan. 1956. *Jiu yu cai* (Jiu and cai). *Yuwen Xuexi* (Language Study) 12:35
1992. *Mantan Hanyu Fuci* (On Chinese Adverbs). *Yuyan Jiaoxue yu Yanjiu* (Language teaching and Linguistics). 1:28-31.
- Wang, Li. 1943/1985. *Xiandai Zhongguo Wenfa* (Modern Chinese Grammar). Shanghai & Beijing: Commerce Publisher.
1947. *Zhongguo Yufa Lilun* (Chinese Grammar Theory). Shanghai: Commerce Publisher.
1958. *Hanyu Shigao* (A manuscript on history of Chinese). 3 vols Beijing: Science Press.
- Werner, Heinz and Bernard Kaplan. 1963. *Symbol-formation: An Organismic-developmental Approach to Language and the Expression of Thought*. New York: Wiley.
- Yang, Bojun. 1979. *Gudai Hanyu Xuci* (On functional words in classic Chinese). Beijing: Zhonghua Book House.
- Yeh, Meng. 1995. *Hai* in Mandarin: from an additive focus to the temporal continuation. Paper presented at Fourth International Conference on Chinese Linguistics. University of Wisconsin-Madison. June 27-30, 1995.
- Ye, Shuxian. 1992. *Zhongguo Shenhua Zhexue* (The philosophy of Chinese mythology). Beijing: Social Sciences Press.
- Zhao, Cheng. 1988. *Jiaguwen Fenlei Cidian* (A Categorical Dictionary of Oracle Inscription). Beijing: Zhonghua Book House.
- Zhang, Taiyan. 1932? *Guogu Lunheng* (On the traditional Chinese studies)
- Zirmunskij, V. M. 1966. The word and its boundaries. *Linguistics* 27:65-91.

A BIOGRAPHICAL SKETCH

Le-ning Liu was born on May 13, 1957 in Xi'an, China. Upon graduation from high school, he was sent by the Chinese government to work on a farm.

After three years on the farm, he was permitted to take the college entrance examination and entered Shaanxi Normal University in 1978. He graduated with a B.A. in Chinese language and literature in December 1981. The following January, he entered the graduate school of the same university. He received an M.A. in the history of the Chinese Language in December 1984.

During 1984-1985 he was enrolled in a post graduate curriculum of ancient Chinese at Zhongshan University in Guangzhou, China. Following this he taught classical and modern Chinese to both native and foreign speakers at his alma mater, Shaanxi Normal University, for four years. There he met Jennifer Burns and married her in 1989.

Le-ning Liu came to the U.S. in 1990, worked at several jobs and finally entered the Ph.D. Program in Linguistics at the University of Florida. From the fall of 1991 to the fall of 1993 he was a graduate teaching assistant in the Department of African and Asian Languages and Literature at UF.

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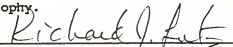
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